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THE COPYRIGHT QUESTION.

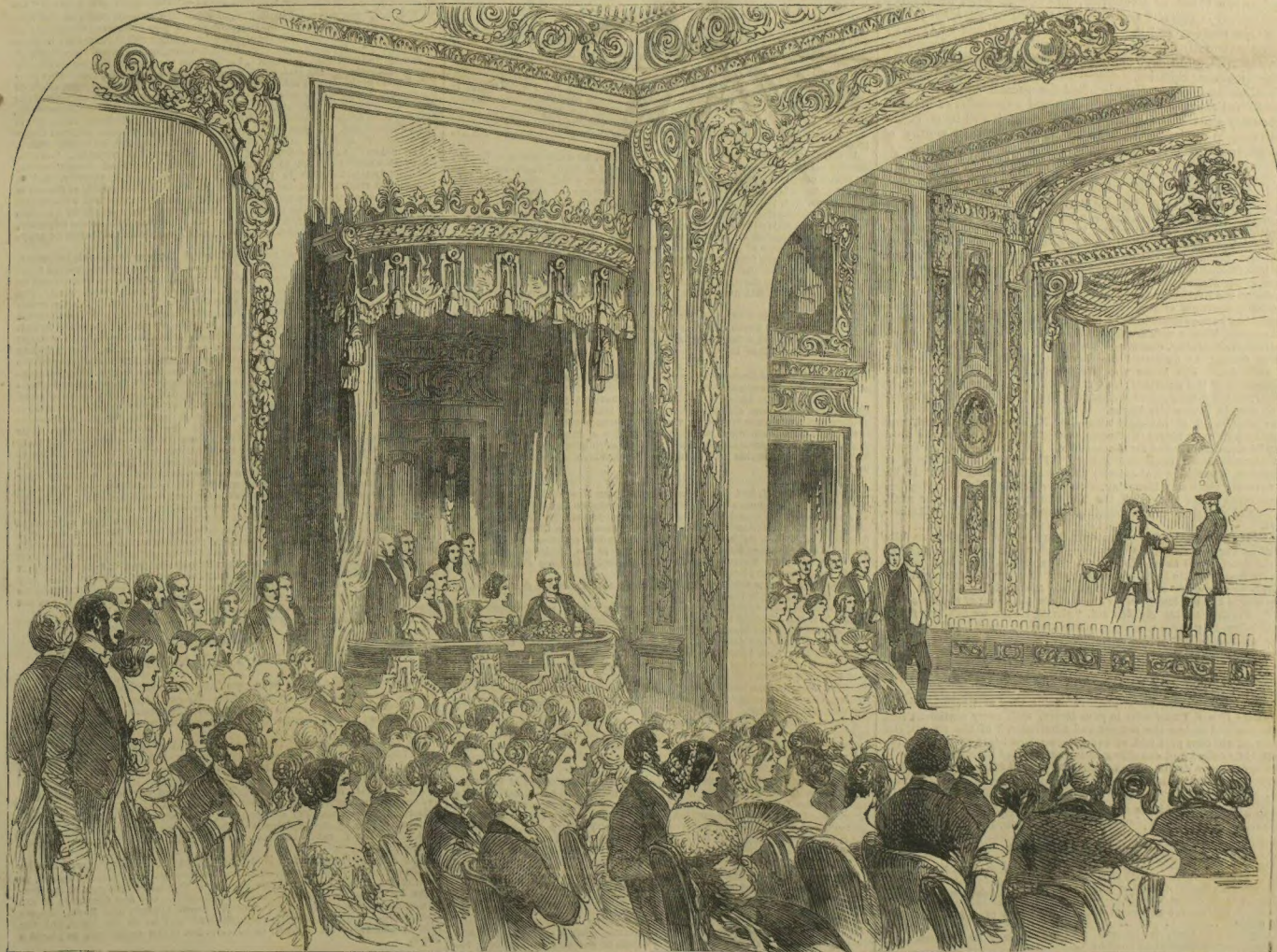
THE Courts of Law have been for some time engaged in the discussion of a question of public importance, in reference to the right of foreign authors to hold or to dispose of the creation of their own brains. We are of opinion that the copyright which an author is entitled to hold in the productions which he creates by his wit, his learning, and his genius, regards not the author alone, or any one country of the brotherhood of Christendom, but the civilisation of which he himself is the product, and that it affects the enjoyment, as well as the improvement, of all nations that exercise the art of printing. In all the civilised countries of the world which possess a literature, a copyright has been conceded to their own subjects for a term more or less extended; and within the last few years, the Legislature of Great Britain has not only re-considered the question as regards the production of books, and granted a further interest in their own works to authors and their heirs, executors, administrators, and assigns, but has extended and simplified the enforcement of a similar protection to designers and inventors.

But the question, unfortunately, has not been entirely set at rest, and a great deal yet remains to be done. There is no concert among the nations of the world to do justice to each other, and to the genius which is the advantage and the ornament of them all.

The works of French writers are reprinted as soon as published, by the literary traders of Brussels; and all the markets of the world, France alone excepted, are supplied at a cheap rate with the productions of French genius, to the benefit of the Brussels printers and booksellers, but not to that of the French authors, without whom there could have been no property in these books, or, more correctly speaking, without whom no such books could have existed. The same system has operated to the disadvantage of the authors of Great Britain and the United States. New books by popular English authors have a large sale in America, but no portion of the profits arising from that sale falls into the pockets of the men by whose learning and talent those books were created. The same wrong is inflicted in England upon American authors, who publish their books in their own cities. The English trade republishes their works, if they are new and good for anything, as soon as they are issued, and the writer on the other side of the Atlantic reaps no reward for the popular delight in his works, and that appreciation of his genius which exists upon this.

The three greatest nations in the world—the nations which march at the very head and front of all humanity—are alike interested in this question; but either for want of a thorough comprehension of its importance on the part of the men who guide their affairs, or from the pressure of matters that appear to be more immediately urgent, scarcely anything has been done by either of them for the

protection of literary men, and the consequent encouragement of literature. Whatever has been done has been local and partial. Good books are of no country. They are the heritage of the world, and there can be no doubt that the world would enjoy more of the valuable commodity if it would recognise the claims of those who write them, and foster genius instead of allowing it to be crushed. If there be living Homers, or Virgils, or Shakespeares, or Miltons, or Corneilles, or Le Sages, now in the world, it is surely for the interest of the world that these men should be enabled to earn their bread and their independence by that literary labour for which nature has endowed them with the requisite gifts. Genius is cosmopolitan. Indeed, the principle of an international copyright is so generally conceded, that even the booksellers of Belgium, France, the United States, and Great Britain, who make it their business to reprint the popular books of other countries, for which there is no copyright out of the narrow locality in which they were first issued, admit the advantage which would accrue to literature from a better and juster system. But while the law is in its present defective state, they may as well take advantage of the absence of all protection as their neighbours. They assert not in justification, but in extenuation, that if one bookseller more moral than another, should refrain from republishing works for which he had paid no compensation to the foreign author, he would not check the system, but merely allow the be-



AMATEUR PERFORMANCE OF SIR EDWARD BULWER LYTTON'S NEW COMEDY, BEFORE HER MAJESTY AND PRINCE ALBERT, AT DEVONSHIRE-HOUSE.—(SEE NEXT PAGE.)

The Master-General and Board of Ordnance have approved of the erection of new schools in Woolwich, to be constructed two stories in height, in front of the Royal Artillery Arms Tavern, at the north-west gate of the barrack, for the education of 300 boys and 250 girls, sons and daughters of the non-commissioned officers and men of the Royal Artillery and Royal Sappers and Miners. The quarters of the schoolmistresses will be on the right, and the schoolmistresses on the left, and on an elevation in the centre will be placed a clock.

The yearly return of the expenditure for the relief of the poor in Ireland, in 163 unions, to the 29th of September last, shews the gross amount to be £1,430,108, of which £710,945 was for in-door relief, £12,799 for out-door relief, and the enormous sum of £598,273 for salaries of officers, &c.

ailed on Mr. Murphy, the collector, and paid his poor-rates, and must have preceded immediately to commit the rash act.



THE START FOR "THE DERBY."

THE DERBY DAY.

RANDOM NOTES ABOUT THE TURF AND TURF MATTERS.

GREAT as the glories of the Crystal Palace undoubtedly are—teeming with contributions of beauty, of luxury, of marvellous device, from all parts of the world—still, even these must yield the palm for the nonce to the more stupendous pageantry, and the weightier and wider-spread interest of a "Derby Day." To the foreigner, at least, who visits our shores in honour of the Great Exhibition of 1851, we venture to say, that not all the varied and heart-moving splendour of the inauguration day, not all the wonders of wealth and ingenuity crowded within the walls of the Glass Museum, can present anything to compete in suggestive attributes with the picture, presented by the Downs of Epsom, and the various roads leading to them, on Wednesday morning last, and the accomplishment of the all-important incident which brought them together. The very sight of so many thousands (we were going to say hundreds of thousands) of human beings of all ranks massed together upon that broad-backed mountain range; the unity of purpose and of object which engrossed their every thought and power of consciousness as with a spell; the tremendous and long-protracted shout, rolling and swelling along the serried ranks, with which the pent-up feelings and aspirations of months found relief upon the eventful moment of that one day: the whole must have presented to a stranger, witnessing it for the first time, a scene which the most stupendous exertions of creative fancy could never have pre-conceived—a scene, the moral effect of which no words can realise.

As, the moral effect. For, let us not suppose that all those cheers come from happy hearts: some come from the habitually lucky, who is "right" now as always; some from men who have got a "turn of luck" for the first time this many a long day; some from men who lose now as they have always lost, and yet so infatuated with their favourite "sport," that, in the face of ruin, they cannot refuse to cheer the honest exertions of a good horse.

Up goes the number; and, as in cold white on black up it goes, how many long-cherished visions of fortune to be made or retrieved vanish. How many anxious hearts in far-distant homesteads are hanging in suspense about that yet nascent tallismen which is to restore home to its long absent comfort, or to break up that struggling home for ever. And beneath the devil-may-care manner of many in that crowd, in the hoarse accents of many a laugh and cheer which rises from it, can we discover no recognition of that far-off misery of which they are the authors, and are to be the helpless sharers? Ah! all is not joy on that Derby Day. Would that its experience might touch and teach many whom fate is already dragging within the dangerous influence of turf speculation.

But to quit moralising. Rightly to enter into the spirit of this extraordinary national solemnity—for such, without exaggeration, it may be called—it must be borne in mind, that, with an Englishman, horse-racing is almost a sort of religious mystery—a race-horse as much an object of idolatry as the bull with the Brahmin—the stud-book a perfect code of mythology. This fantasy is not confined to any particular class; it pervades, more or less directly, every grade of society, every walk in life, every age, extending even to the softer sex. The

head-quarters of turf-speculation, as it is called, are, undoubtedly, the Subscription-rooms at Tattersall's. Here the aristocracy of the land, the owners of large studs of horses, meet the book-makers, who bet about them in thousands and tens of thousands, and give the *not d'ordre* as to the odds of the day, for the guidance of minor operators elsewhere. But this is only the centre of the great circle; it is not the circle itself, whose circumference extends wherever an Englishman may meet an Englishman. For, not only in London and throughout England, but in the colonies, in foreign states, on ship-board, on the wide Pacific, the dates of the great "meetings" of the season are religiously treasured in the Englishman's memory, together with the names of the probable competitors, and bets laid upon the result with the same zest and the same affectionate interest as if the parties were actually on the spot. In fact, is not every club-house a little Tattersall's—every pot-house a "Corner," in which "knowing ones," in threadbare coats and shoes down at heel, boast of an amount of judgment and private information upon events past and to come, which makes one wonder that they have not long ago made their fortunes and retired from business. At the *soirées* of the great, between the quadrille and the close-following polka, wearied with the stereotyped commonplaces about the last opera, how charmingly does our fair partner throw life into the discourse, by inquiring who is now the favourite for the Derby?—say, perhaps even making a bet—in gloves, of course—in support of her opinion in the matter. In the City, after concluding a bargain in iron or corn, how naturally comes the inquiry, just before parting, "What do you think about the Derby?" Your tailor, after you have ordered half-a-dozen waistcoats, in satisfaction, or, at least, in abatement, of his bill filed and delivered last Christmas, in a very deferential tone, asks you if you can put him upon a good thing for the Derby?—which, of course, you do to the best of your judgment. Barristers, in the robing-room and in the intervals of repose between the cross-examination of witnesses, learnedly canvass the pretensions of each new popular nag. Physicians, as they consult about the fate of some struggling member of humanity, can yet find time to intercalate a passing note about the health of the favourite. And let any respectable person for the Wednesday in the Epsom week, and see with what a look of astonishment and scorn he will be reminded that "It's the Derby Day!" Does not the House of Commons adjourn over the Derby Day? Is not all London deserted on the Derby Day? Have not anxious deputations from all corners of the country poured up to the sacred hill of Epsom on the Derby Day, anxious to pay homage to the hero of the Derby Day—ay, and tribute too, should the fates be adverse—tribute of the last shilling in pocket, while the chances of the Derby Day award, in the shape of bets, to some more favoured children of Fortune?

Why the race for the Derby is so much more important than any other event of the kind which occurs in the year, may be accounted for by the enormous amount of stakes and bets depending upon it, and the length of time over which the preparations for it have been spread; the care, the money, the skill, which

have been lavished upon the education of the candidates, the accidents which have in many cases thwarted the most honest exertions and dashed the brightest hopes, and, finally, the charm which always hangs about events long pending in the womb of time, and in the decision of which, after all, chance, mere chance, must necessarily have a large share.

The amount of the stakes of the present Derby may be judged of from the number of horses in the original entry, 185 (in some Derbys the entry has been large, once showing as many as 239 candidates), who will all pay a forfeit—that is, those who do not run, of £25 each, making for absentees alone nearly £4600. Those which run, pay an extra £25, or £50 in all; so that the stakes this year will amount to upwards of £5500. But this is the smallest part of the pecuniary considerations involved in this great speculative transaction. Two years ago, these 185 horses, then yearlings, were entered, and we may reasonably suppose were each in its owner's estimation considered to have a possible chance of winning. What sums of money have been spent upon their training since (the usual cost of a race-horse in training being estimated at £100 a year); what sums risked from time to time in backing them at long odds, upon the discovery of some promise of ability; what disappointment of individual hopes and cares, as, one by one, these interesting creatures have broken faith in their promises—shown themselves incompetent for the great struggle for which they had once been thought worthy; and so diminishing the lists of candidates, that, on the day of running, out of nearly 200 horses entered two years ago, not more than twenty or five-and-twenty (sometimes the runners have been as few as half that number) will come to the post and contest the laurels of the year.

The mystery of horse-racing, *per se*, confining the term to that which concerns the rearing and training and riding of race-horses, is a science, in three distinct branches, of which a modern Encyclopedia would not contain the details, nor a whole life suffice to master the practice. Shall we attempt, therefore, in this paper, to give an idea of either? Certainly not; for, after many years' patient study, all we know about it is that we know nothing, to borrow the epigrammatic phraseology of an ancient philosopher whose name we cannot be supposed to recollect at this moment, seeing it is not in the entry for the Derby. But we may still have our little say, and our little investment upon the race, as a betting transaction, with just as much confidence as the most self-important as if we were the owner of half the horse. This, indeed, is horse-racing in the popular sense; for, except at "the Derby," the major part of the denizens of "the sporting world," as they constitute themselves, have never seen a race or a race-horse, and yet know all their names, and their pedigrees, and their public performances, and their private trials, and the state of their health, and of their temper, and their owners' intentions, and the "movements of the stables" in which they are, and the movements at "the Corner" respecting them, as if they had constantly been in their company. Indeed, it sometimes happens, that your sporting man, in the person of some bewildered attorney's clerk, nervous tailor perhaps, is so infatuated about the horse which he has taken

under his especial patronage, that, although he has never seen the colour of its tail, he almost believes it to belong to himself, simply because he has invested two crowns, one on the top of the other, in backing him for a great coming event. There are some jurists of the public press, moreover, who would seem to sanction such impressions, having very deliberately laid it down as law, "crown's law," that although the man who bred or purchased the horse, and pays for his keep and training, and the stakes he may lose, and other little incidental et ceteras, is its nominal owner, the animal is in reality public property, and should be made to run upon all occasions whether he can or will, just to satisfy the prejudices of those who have honoured him by supporting his pretensions in the market. The soundness of this doctrine has not yet been authoritatively established by the Court of Queen's Bench; but a little more than a twelvemonth ago it was incidentally involved in a case gravely argued before the Court of Chancery, as to whether a certain horse—Bolingbroke to wit—should be compelled to run, and run his best, for the last year's Derby, in spite of the supposed predictions and wishes of its owner to the contrary. And to the great contentment of the public, the decision was in the affirmative, and Bolingbroke ran but did not win.

To return to the subject of betting: it must be obvious, that, if I back a horse for the Derby, twelve months before the race, at long odds, say 100 to 10, and that horse dies, or goes wrong in the interim, I must either lose my £10, or back another horse for the chance of winning. So, also, if I back one horse, the best in any particular stable, I will suppose, and then hear of another as good or better a dozen more, picking, as I fondly flatter myself, the most likely horses of the whole entry. But, whilst my information, or judgment, or caprice, or good luck may occasion my backing the winner amongst this numerous lot, there are hundreds of others who are not so fortunate—hundreds, ay, thousands, who, amongst them, back almost every horse in the entry, at odds not of 150 to 1, as they would, supposing the horses had remained at a level chance, but at odds much shorter—at 50, 40, 30—say, 10 and 5 to 1. Notably, two horses, Grecian and Mountain Deer, have been backed for enormous sums, in the course of the winter and spring, at 5 and 6 to 1 respectively; neither of which, for many weeks past, has been considered to have the remotest chance of winning. As a natural consequence of their decline, other horses have come into equal, and even better favour: two being at 5 and 4 to 1; besides dozens that have been at 12, 10, 8, and 6 to 1. Now, only imagine the balance account of the man who should have laid all these odds; that is, who should have steadily backed the chances of "the field" against each of these particular favourites of the day. It must stand to reason, requiring little calculation to prove it, that he must receive, in bets lost to him, much more than he will have to pay, even should one of the heavily-backed favourites win; whilst, should an "outsider," or non-favourite horse win, his gains will be proportionably greater, inasmuch as the larger stakes on the favourite, instead of the smaller stakes upon the outsider, will go to swell the credit-side of his account. To make this position clear by illustration: if I have laid 500 to 100 against A, and 500 to 10 against B, of course I would rather B won than A, because I should receive £100 instead of



SKETCH ON THE ROAD.—THE COCK INN, SUTTON.

£10 to put against my £500. Observing that a professional bettor, or book-maker," always lays, or proposes to lay, a certain maximum

amount against every horse—say £5000 against each—he is more generally able to lay the full sum against favourites than outsiders, the consequence being, that, when an outsider pops his nose in first past the lodge, he gains many thousands to the "bookmaker."

There are bookmakers of all sorts and sizes, from the lordling or exquisite, who proclaims his readiness to deal with the world at large, in very genteel accents, partaking equally of a drawl and a lisp, and notes down his bets with gold pencil on gilt-edged betting-book; and the leviathan who lays £50,000 with as little concern as fifty pence, and bawls out full statement of everything he can do with a voice as loud as that of a boatswain's mate, to the little speculator in cigar-shop or betting-office, who takes your shilling to return you six about Teddington, and gives you a dirty printed card by way of a voucher for the transaction. O.

Smith, £12,000; J. Letts, £12,000. Also the wills of the Earl of Airlie and Sir H. S. Northcote have been administered to.



MORDEN CHURCH.

NOOKS AND CORNERS OF OLD ENGLAND.

MERTON AND MORDEN CHURCHES.

THESE are two road-side "Nooks" familiar to most visitors of Epsom. Merton Church, however, lies at some distance from the road, and is a long and narrow structure, merely consisting of a nave and chancel, a north entrance-porch, and a small spire issuing from the roof at the west end, and containing three bells. The walls are chiefly of flint coated with plaster, and may, possibly, be those of the ancient church mentioned in Domesday Book: the doorway is surmounted by a Norman arch, with zig-zag mouldings. In the churchyard lies a benevolent native of Merton, who was embroiderer to Charles II., and bequeathed tenements and land for apprenticing children of poor parishioners.

Morden Church, a long and narrow fabric, dedicated to St. Lawrence, was rebuilt with brick about the year 1636. The ancient windows are of stone, and in the pointed style; that at the east end is elegant. The building consists of a nave and chancel, with a low embattled tower at the west end (containing three bells), and a small south porch, forming the chief entrance. The east window has some fine stained and painted glass; the dove and cherubim, in the upper compartment, being designed by an accomplished lady long resident in the parish. The church contains numerous monuments, gravestones, and inscriptions on brass, to the memory of distinguished families; and in the churchyard are a few tombs of old families.

ABREGE EN FRANÇAIS DE LA LOI PROVISOIRE SUR L'EXPOSITION DE 1851.—THE PROVISIONAL ACT FOR THE EXHIBITION OF 1851.—This brief supplement to Godson and Burke's work on patents and copyright has a somewhat curious feature. It gives the law relative to the Exhibition of 1851 in French as well as English, and will, no doubt, prove useful to all foreigners taking an interest in the Crystal Palace and its wonders.



MERTON CHURCH.



TATTENHAM-CORNER.

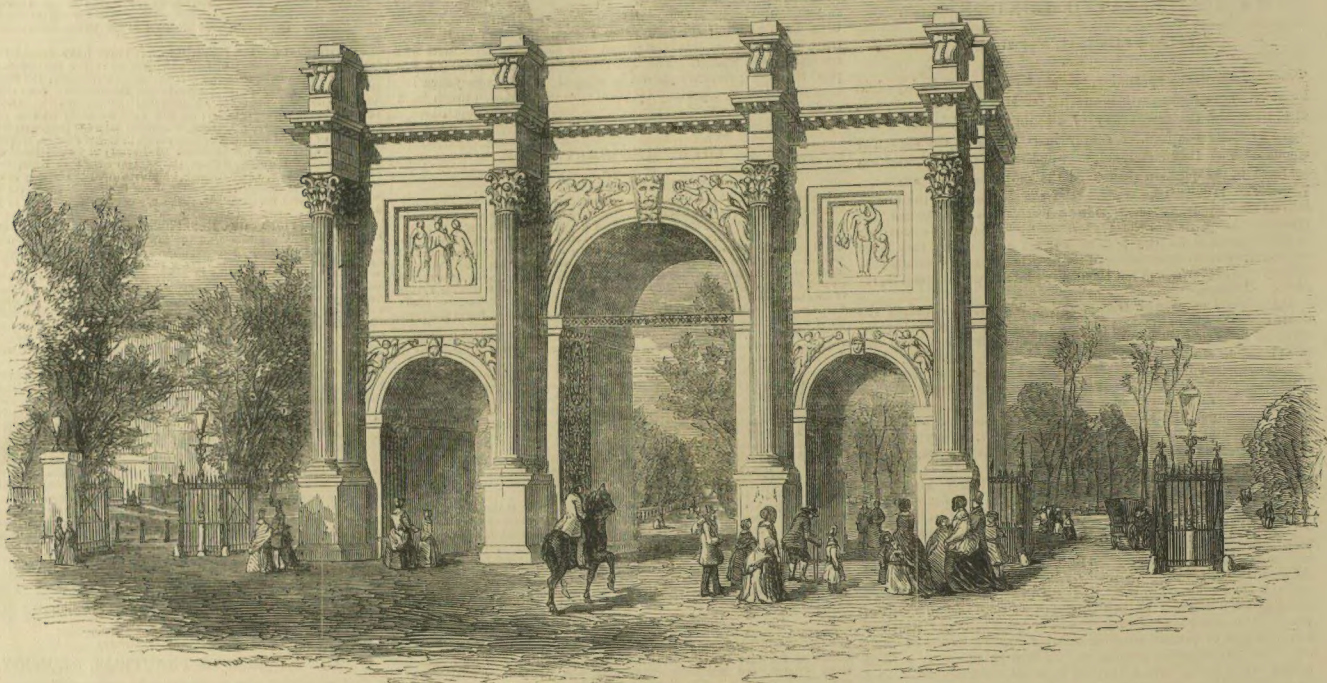
LONDON, SATURDAY, MAY 24, 1851.

The Royal Commissioners and the Executive Committee, and, in fact, all the gentlemen who have been concerned in the arrangements of the Great Exhibition, have achieved their arduous task in a manner the most admirable; it may therefore seem ungracious to find fault with them. But even they, with all their claims to the public gratitude, must nevertheless not expect that every error of judgment which they may commit shall pass unnoticed; and it is because they have deserved so well of their country, that we feel bound to remonstrate with them on what we must consider their ill-judged refusal to comply with the request of the Exhibitors for a free admission to the Crystal Palace. When it is

The Rev. Archdeacon Hale held his visitation at St. Sepulchre's Church, now-halt, according to annual custom, on Thursday morning. After service, the Archdeacon proceeded from his pew to the communion-table, and when about to deliver his Charge, discovered that he had not brought it to the communion-table. Having asked some one to fetch it from the pew, which he occupied, he found it was not there. He then, in his haste, took it from his hand, it was discovered that it had been removed. All search for the document proved fruitless. It was remarked by several of the clergy, that immediately upon the Archdeacon leaving the pew, two laymen were seen to go into the vestry, and immediately afterwards abruptly to return. The matter being thus explained, the Archdeacon proceeded with the manuscript away. The venerable Archdeacon Hale was much agitated, but, after taking a few minutes, to collect his thoughts, he addressed the clergy, asking their kind consideration for the unpleasant and painful circumstances in which he had been so unexpectedly placed. He then proceeded to read the Charge, and, in the course of his address, he would endeavour to give them the substance, which must necessarily be imperfect, when he assured them that, although at a former period of his life he was in the habit of speaking in public, he had never delivered a line extempore in the performance of his sacred office. He then proceeded to speak in terms of the highest commendation of the present session, of the decided conviction that, notwithstanding the strong feeling which had been manifested against the conduct of the Court of Rome, it would be successful. He then alluded, in energetic and forcible language, to the recent secessions to Rome, the teaching of many of the clergy of the Church of England, and the conduct of the Holy Church, which he said they were guilty of, the falsehood of church worship, and the intonation of the services in parish churches, all of which he observed were indications of a Romanising spirit, and contrary to the teaching of the English branch of the Catholic Church. He deprecated controversy, and urged the sole duty of the clergy to be the teaching of the people. Having concluded an admirable address, the very rev. gentleman was addressed by the Rev. William Short, rector, of St. George's Bloomsbury, who expressed the deep sympathy which the clergy felt for the venerable Archdeacon under the painful circumstances in which he had been placed, and the deep sympathy which he felt for the doctrine and teaching of the Church of England.

UNDER the vitreous shower which fell so plentifully upon the farble, shell, a short time after this party took of Royalty found a "place" a "bitch," if we remember rightly, neither of the flock of "Complacents" had suggested; and, while the public were debating upon the matter, the First Commissioner of her Majesty's office of Woods and Forests quietly disposed of the Arch, by placing it upon the site of Unberland-Gate, the north-eastern entrance to Hyde-Park. We do not object to the new location, and only wish the Commissioner had not so much of a mount of judgment in the Rotten-row and Kensington gardens question.

The Arch is best seen from the Park, but has still, as it had at Buck-



THE MARBLE ARCH CUMBERLAND-GATE HYDE-PARK.

ngham Palace, a pedestal-like effect: this is not to be wondered at, seeing that the attic was originally intended to bear a colossal bronze emblematic group of Victory in a three or four-horsed car; which portion of the design was eventually changed to an equestrian statue of George IV.: this was executed by Chantrey, at a cost of 9000 guineas, but now occupies the pedestal at the north-east angle of Trafalgar-square. Again, there were to have been whole-length figures in the attic in place of which we have inverted trusses, of anything but decorative character. However, here is the Arch, scraped and cleaned, and freed of its dirty-sugar-like appearance. To make way for it, the handsome iron gates have been removed and placed on each side the Arch, which has a sort of anomalous appearance from the centre gate being mostly kept shut; but the side-arches are open for foot-passengers. These iron gates, by the way, were erected in 1822, at the expense of the late Henry Philip Hope, Esq.; they cost £2000, and are fine specimens of iron-work. It was considered, at the time of their removal, somewhat ungrateful, thus unceremoniously to set aside so handsome a

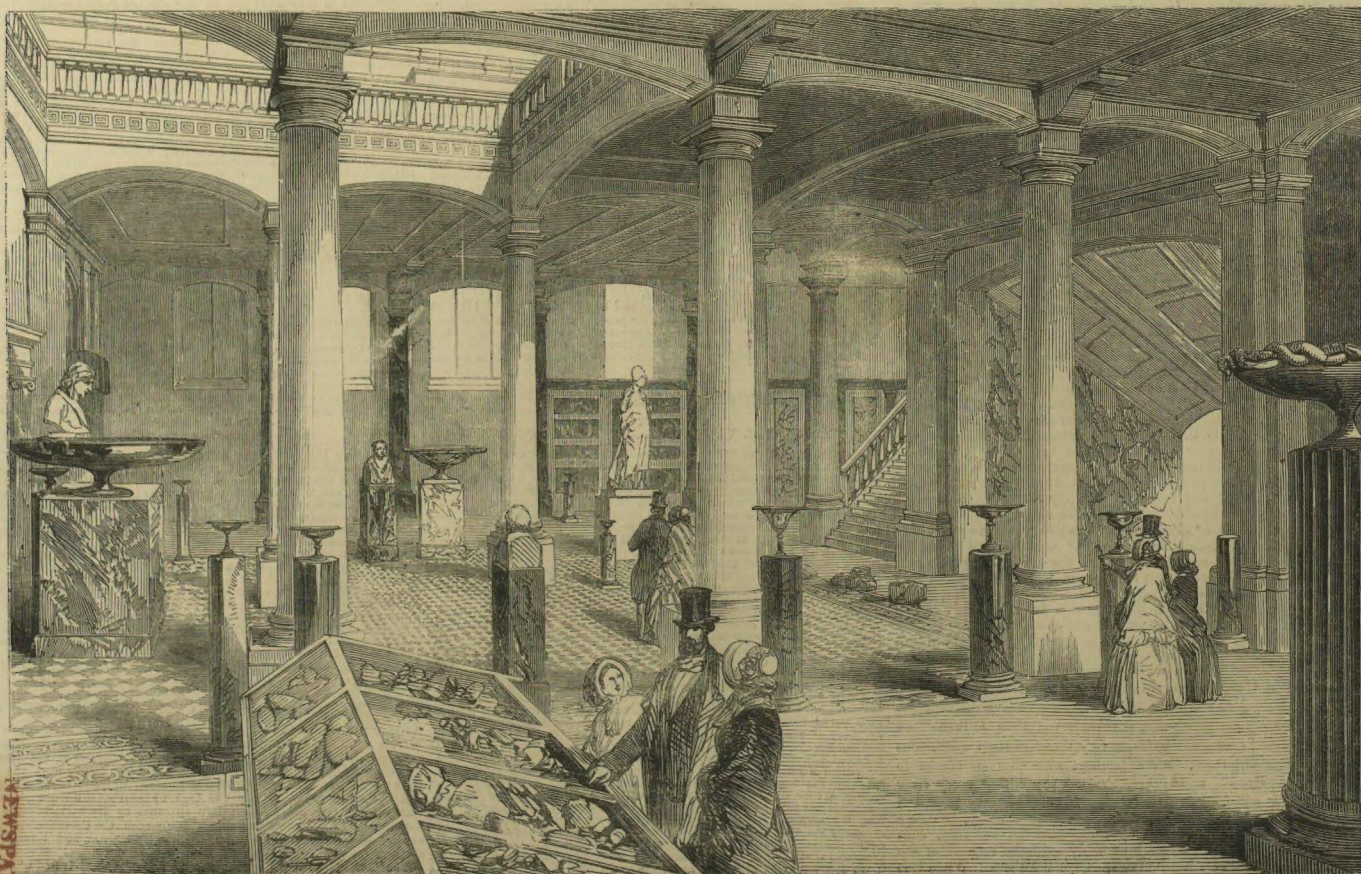
present to the public, more especially to make room for what at best is but a poor work of art.

The Arch was originally erected in front of the court-yard of Buckingham Palace, St. James's-park, and was reserved for the especial entrance of the Sovereign and the Royal family. It is the largest work of mere ornament ever attempted in Great Britain. It was adopted by Nash from the arch of Constantine at Rome: the larger archway, as first designed, was not sufficiently wide to admit the Royal state-coach; fortunately the blunder was discovered in time to be remedied. The material is Carrara marble, which soon became discoloured by smoke and damp. Some of the blocks are extraordinarily large. In each face are four Corinthian columns; the other sculpture being a keystone to the centre archway, and a pair of figures in the spandrels; a panel of figures over each side entrance, and wreaths at each end: these are by Flaxman, Westmacott, and Rossi. The centre gates, designed and cast by Samuel Parker, of Argyl-street, are the largest and most superb in Europe, not excepting those of the Ducal Palace at Venice, and of the Louvre at Paris. They are of a beautiful

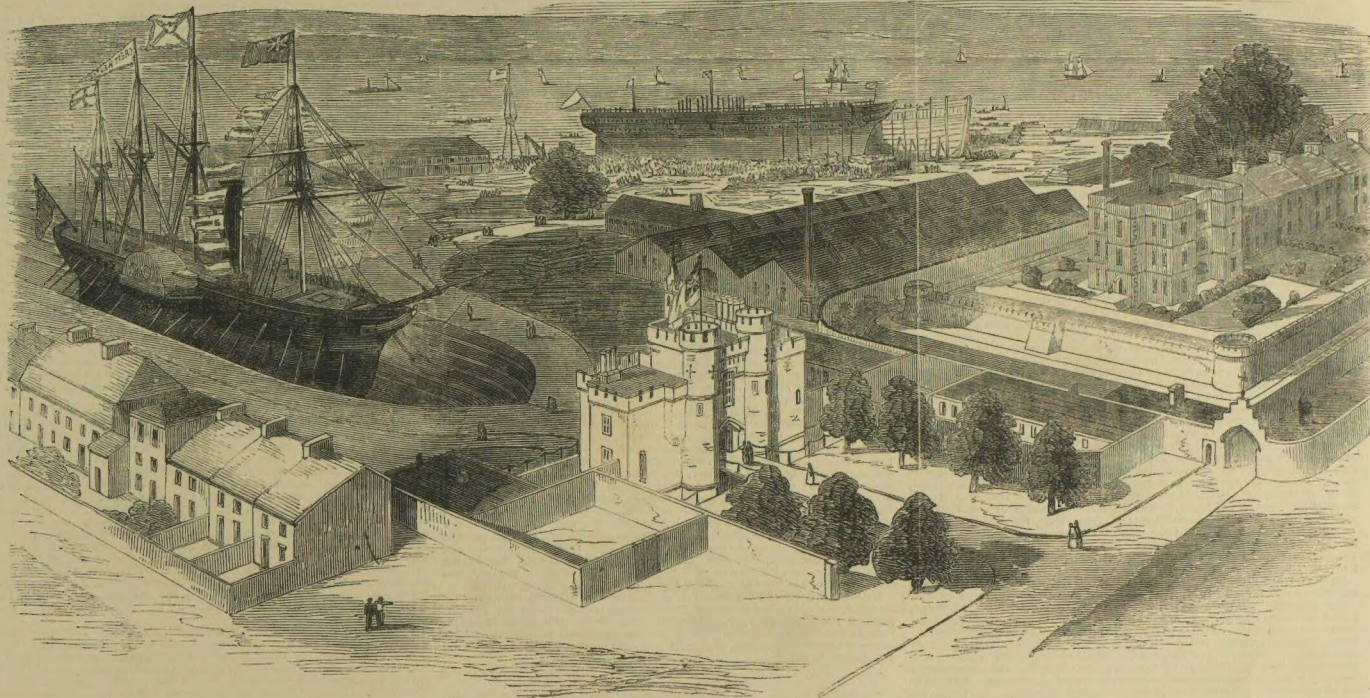
alloy, the base refined copper, bronzed; design, scroll-work, with six circular openings, two filled with St. George and the Dragon, two with G. R., and above, two lions *passant gardant*; height to the top of Arch, 21 feet; width, 15 feet; weight, 5 tons 6 cwt: cost, 3000 guineas, including a frieze and semicircle, to fill up the archway, the most beautiful portion of the design, but irreparably mutilated in removal from the foundry.

The cost of the Arch, statue, gates, and railing has exceeded £70,000 yet this is but a trifle in comparison with the cost of the Arc de l'Etoile at Paris—£416,866.

Cumberland-gate was opened about 1774-75, when Cumberland Place was built. The gate was erected by subscription of the neighbouring inhabitants, and was meanly built of brick. Here Richard Honey was killed by the firing of the military, at the funeral of Queen Caroline, August 15, 1817; in the following year the gate was taken down, and Mr. Hope's iron-work set up in its place. The gate at this spot was originally called Tyburn-gate; and Park-lane, Tyburn-lane.



THE MUSEUM OF PRACTICAL GEOLOGY.—THE GREAT HALL.—(SEE PRECEDING PAGE.)



LAUNCH OF THE "ORINOCO," WEST INDIA MAIL STEAMER AT NORTHFLEET DOCKYARD.

LAUNCH OF THE ROYAL MAIL STEAM-SHIP
"ORINOCO."

ON Saturday last, the ship-building yard of Mr. William Fitcher, at Northfleet, presented an animated spectacle, it being the day fixed for launching the *Orinoco*, the first of the five large steamers now building for the Royal Mail Steam-Packet Company, to enable them to carry out the arrangements made with the Government under their renewed contract. The *Orinoco* has occupied about eight months in building; and her sister ship, the *Magdalena*, which was commenced shortly after, is fast approaching completion.

The principal dimensions of the *Orinoco* are as follows:—

Length between the perpendiculars	269 feet 2½ inches.
Length of spar deck over all	276 " 6 "

Breadth, extreme	41 " 10 "
Ditto, for tonnage	41 " 6 "
Depth in hold	26 " 1 "

Burthen in tons, 2245 31-34, builder's measurement.

The weather was exceedingly propitious, and a very large concourse assembled to witness the proceedings. Both the yard and the vessel were pleasingly decorated; and the *Great Western* being in dry dock at the time, and displaying all her colours, added not a little to the liveliness of the scene.

About half-past two, the dog-shores were withdrawn, and the vessel was instantly in motion. The ceremony of naming was performed by Lady Anne Tufnell, who was accompanied by the Right Hon. Henry Tufnell; and amongst the company present we were pleased to observe M. Jules Janin, the celebrated *sculpteur*, and several other foreigners of distinction. Two steamers were in readiness to take the

vessel in tow, and convey her to the East India Docks, where she is to be fitted with double-cylinder engines, of the collective power of 800 horses, by the eminent firm of Messrs. Maudslay, Sons, and Field.

The draught of the *Orinoco*, when launched, was 9 feet 9 inches forward, and 10 feet 10 inches abaft: the light displacement, with that draught of water, is 1040 tons; and if 2000 tons be added for the freight to be taken on board in the shape of engines, coals, equipment, passengers, and luggage, it is estimated that she will go to sea, about four months from this period, with a mean draught of water of about 19 feet 6 inches. The *Orinoco* looks well on the water, and is considered by competent judges a beautiful and well-built ship; and, there being no slip over her when built, the launch had a fine effect.

After the launch, the visitors who had received invitations from the builder adjourned to the Rosherville Hotel, where a handsome collation had been provided for them, and the party separated at an early hour expressing themselves highly gratified with the day's proceedings.



GRAND ENTERTAINMENT GIVEN AT THE CASTLE HOTEL, RICHMOND, BY THE METROPOLITAN LOCAL COMMISSIONERS OF THE GREAT EXHIBITION TO THE FOREIGN COMMISSIONERS.—(SEE NEXT PAGE.)

ROYAL ITALIAN OPERA.
Weber's "Der Freyschütz" was revived last Saturday night. Her Majesty and Prince Albert, accompanied by the Duke and Duchess of Saxe-Coburg-Gotha,



MONSTER CASKS OF SHERRY IN THE LONDON DOCKS.

the work had not been commenced. The one that broke, and produced the fearful consequences so much lamented, was the uppermost on the fourth floor. It had been fixed some days, and the walls had been carried up to the height required to receive the cask. According to Mr. Bell's statement to the City surveyors, he saw it there on Saturday morning, when he went over the works with Mr. King, the superintendent, and found everything apparently safe and progressing to his satisfaction.

An attempt was made to discover the cause of the girder breaking. This was found impracticable, as the broken fragments lay embedded in the ruins. The people employ on the works say they are confident there was no weight on the girder to cause it to break, and express an opinion that it must have arisen from a flaw in the casting. It seems that Messrs. Bell and Corbett possess certificates, showing that the whole of the iron joists and girders employed in the building were properly tested and warranted.

The following list of the sufferers has been published:—

Peter Horrigan, dug out of the ruins.

Jeremiah Connor, dug out of the ruins.

Michael Cronin, dug out of the ruins.

Joseph Hanley, aged about thirty-two, a compound fracture of the base of the skull, and both legs broken. Taken to St. Thomas's Hospital. Since dead.

Timothy Donohue, aged 42, dead. He was supposed by his comrades not to have been on the building at the time of the accident, but it appears he was on the top, and was one of the unfortunate creatures who were precipitated to the ground with the walls and floor, when they fell. He was got out by some strangers, and taken to St. Bartholomew's Hospital, where he died almost immediately.

Timothy Sullivan, aged about 20, both legs fractured, severe contusions on the body and head. Remains in a dangerous condition in the same hospital.

W. Ransom, aged 24, right leg fractured, and body much bruised. Supposed to have received many severe internal injuries.

W. Whiting, aged 31, scalp seriously fractured, with divers wounds and contusions over the body. Not expected to recover.

Thomas Clark, aged 20, scalp lacerated, and ribs supposed to be fractured. In a very dangerous condition.

John Cwyer, aged 30, laceration of the scalp, and several severe contusions on the body. Expected to recover.

George Barham, aged 23, fracture of the legs, and severe injury to the scalp. Hopes of recovery.

David Foley, aged 21, numerous wounds and bruises over the body, and head much injured. Expected to recover.

James Kirby, aged 28, lost much out, and lower part of the body seriously injured. Recovery doubtful.

Henry Perry, aged 34, slightly contused over the body and head. Nothing fatal apprehended.

James Jenkins, slightly injured.

MONSTER CASKS OF SHERRY IN THE LONDON DOCKS.

In connexion with the Great Exhibition incidents, we have to notice the importation of four Monster Casks of remarkably fine Sherry, by Mr. John Fowler, wine-merchant, Wells-street, Cripplegate, by the ship *Traveller*, Captain A. R. Henderson, from Cadiz. These casks are larger than hitherto known to have been imported from Spain, and their shipment caused some sensation in that country. The larger casks contain 2900 gallons, and the two smaller ones half that quantity. They have been branded, by the express command of the Queen of Spain, with the Royal arms. The casks are of English manufacture, and were shipped to Spain, where they have been for seasoning since the Great Exhibition of 1851 was first broached, in anticipation that they would have been admitted, and the wines sold for refreshment; but the object of the importer is more particularly, we understand, to show the connoisseur and the trade, that wines of this high order, and purely free from brandy, cannot be shipped to this country in small quantities without great deterioration in quality.

The London Dock Company have had great difficulty in receiving these casks, and have been compelled to fix up shears for delivering them from the lighter; also some additional apparatus for raising the same. The dimensions of the larger casks are—round the bouge, 10½ yards; diameter of the head, 2½ yards.

The peculiar order of these wines are as follows:—The wine marked *vvvv* is comprised of a very old stock of the palest wines, and possesses great flavour, great aroma, with age, and delicacy of extraordinary description.

Fu, Fino Fino.—This wine is extremely delicate, of the very highest order of wines of this peculiarity.

U. Biso.—This wine possesses the finest flavour, and the most elegant aroma of its class.

Solerias.—This wine is of the oldest stock that Spain can produce.

THE "FAIRY QUEEN."

Among the many interesting sights of this wonder-fraught season is "the Fairy Queen," who has recently changed her place of exhibition from Leicester-square to the corner of Hall-street, Goswell-road. This interesting and diminutive little girl, when born, weighed only one pound and a half. She is now fourteen months old, weighs five pounds, and

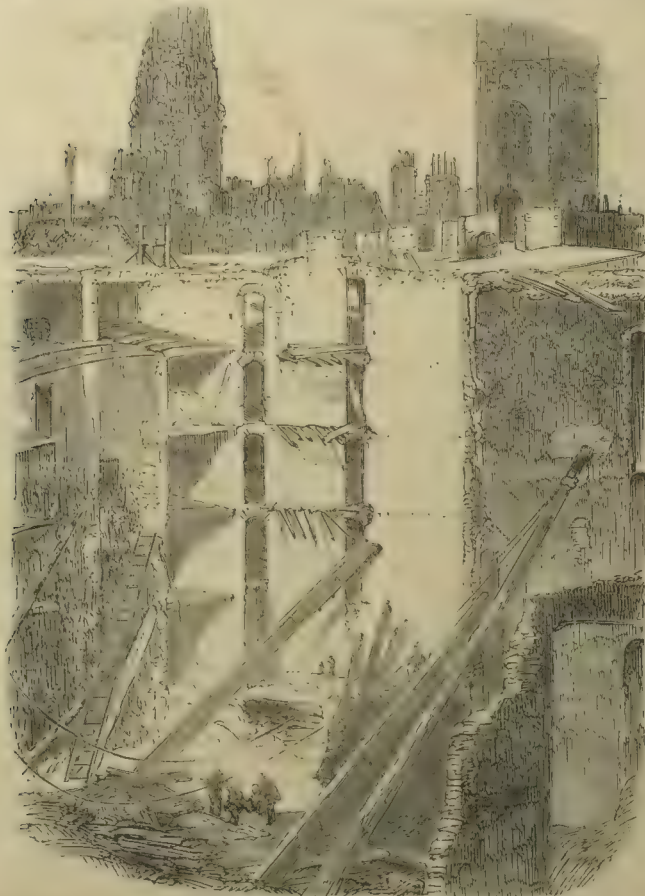


THE "FAIRY QUEEN."

measures sixteen inches in height; her feet are but two inches in length and she possesses the utmost regularity of limb and feature.

THE CHINESE FAMILY.

A PLEASING addition has been made to the Chinese Collection, consisting of a Chinese lady, named Pwan-ye-Koo, with small lotus-feet only 2½ inches in length, a Chinese professor of music, his two children (a boy and a girl), the *femme de chambre* of the lady, and an interpreter. The children are gay, lively, and intelligent, the lady herself agreeable and interesting, and the gentlemen civil and obliging. A Chinese concert forms part of the entertainment; the lady Pwan-ye-Koo singing a Chinese air or two, accompanied by the professor, who likewise treats the public with an exhibition of his vocal powers. The group is one that has much to commend it: it is picturesque and peculiar, and presents an image in high relief of the native manners of a Chinese family. The conduct of the domestic blended the humble and the familiar in a significant manner; and there was an air of freedom, and a sense of mutual obligation manifested in the whole party, calculated to make a favourable impression on the spectator.



REMAINS OF THE FALLEN PREMISES IN GRACECHURCH-STREET.—SKETCHED FROM THE ROOF OF AN ADJOINING HOUSE.



THE CHINESE FAMILY, IN THE EXHIBITION AT ALBERT GATE. FROM A PHOTOGRAPH BY BEARD.



ST. PETER'S HOSPITAL, EAST-HILL, WAINBOROUGH.—FROM THE RAILWAY.—(SEE NEXT PAGE.)

SPEAKING TO THE EYE.

(From the "Economist.")

Those whose office it is to dispense instruction are practising a new art. Our great authors are now artists. They speak to the eye, and their language is fascinating and impressive. The events of the day or the week are illustrated or described by the pencil; and so popular is this mode of communication, that illustrated newspapers are becoming common over all Europe. If they do not supersede other journals, they surpass them in public favour. Any one passing along the Strand, between Friday and Tuesday, except on Sunday, must have seen, opposite the church of St. Clement Danes, and at the corner of Milford-lane, a crowd of men and lads showing and struggling, and heard them joking and hawking as they fought their way up to a side door, and every now and then a man or a lad emerging

from the crowd bearing aloft in triumph, as if snatched from some rival, a quire or two of newspapers. Around the front of the house, too, the passer-by would observe people stopping to gaze into the windows of the shop hung round with pictures. This is the publishing office of the ILLUSTRATED LONDON NEWS, which is said to send out weekly, on ordinary occasions, the extraordinary number of between 70,000 and 100,000 copies, and, on such an occasion as the opening of the Exhibition, to issue nearly 200,000 copies; and thus keeps, for half the week, that part of the Strand in a tumult, while the operation of distributing the papers is going on. Such a sale is, we believe, wholly unexampled either in England or any other country, and it is due to the pictures by which each Saturday the events of the week are illustrated. A similar and successful, though not equally successful, journal, in imitation of the London paper, is published in Paris, Madrid, Leipzig, and a great many other towns on the Continent. *Punch* owed much of its success to its

illustrations; and it is the same with many other publications. Artists now dispute the palm with the most popular authors, and, however greatly some of the latter are favoured, they stand below skilful wood-engravers.

The causes and consequences of this dawning and important change are worthy of notice.

The causes, though many have combined within the last few years to effect improvements in engraving and printing, may all be summed up in the facility with which these are now accomplished, and the comparative cheapness in consequence of illustrations. In the ILLUSTRATED LONDON NEWS of the week before last, which, with a Supplement, sold for a shilling, there were thirty-four wood-cut embellishments, some of them filling two pages of the Journal, representing the opening of the Exhibition, the Building itself, some of its contents, some of the pictures in the Royal Academy, and some of the events or interesting occurrences



—On the 17th inst, Dr Edward Clark Baker, aged 48.—On the 18th instant, Elizabeth, wife of Mr T T Fallows, 4, Halkin-street West, Belgrave-square.—On Thursday, the 22nd inst, after a very painful illness, in his 48th year, Mr John Johnson, of the Manor Farm, Highgate, universally respected and deeply lamented.

THE ILLUSTRATED LONDON NEWS SUPPLEMENT.

No. 488.—VOL. XVIII.]

SATURDAY, MAY 24, 1851.

[Two Numbers, 1s. (WITH LARGE PRINT, GRATIS.)

THE GREAT EXHIBITION.

THE journals which report the proceedings at the Crystal Palace have, perhaps, a difficult task to convey to the most distant parts of the world a full, true, and particular account of the wonders of art and industry exhibited within; but they have no difficulty in reporting its success. The Exhibition continues to grow in favour. Upon that point there can be no mistake. As its popularity increases, the views of its founders and of the more enlightened portions of the public, as to its future usefulness, extend. Day by day the circle widens. The money pours in at the rate of nearly £20,000 per week; so that the Executive Committee, instead of being in any difficulty for the ways and means of making themselves straight with the world, will shortly be in possession of a very handsome surplus. We notice with pleasure, among the first developments of plans which have suggested themselves, that a series of lectures within the Building have been announced. Professor Cowper will lecture on the section of machinery; Professor Ansted will treat of minerals and raw produce; and Mr. O'Brien, who has taken charge of the philosophical instruments, will lecture on that department. Arrangements will doubtless be made at a more advanced period of the season, to enable the working men of the provinces not only to see these wonders of human ingenuity, but to hear the lectures of those competent teachers on the application of the arts to the service of humanity. Furthermore, we expect that colleges and schools will be enabled to give their students a similar advantage. In fact, the manifold uses of the Exhibition in a national point of view are only beginning to be discovered; so that the more the subject is considered, the greater and more beneficent appear the purposes to which it may be directed. Nationally and internationally, it is equally interesting. What the ultimate result may be, we will not presume even to hint; but the present results must be allowed to be in the highest degree gratifying both to the clear-sighted energy and perseverance in a good object of those who founded the Exhibition, and to the national character.

In resuming our account of the several sections, the first notice is due to the productions of our French neighbours.

The French department is at length beginning to make a display worthy of the nation which assumes, not without reason, to set an example of taste in all manufactures susceptible of artistic treatment.

A great deal still remains to be done. The galleries are only half furnished, and the hammer and saw are still at work in the bays leading from the grand avenue; but enough has been arranged to attract and rivet the attention of crowds who had begun to fear that France had retired from the contest.

The fact is, that the French, who have been accustomed to teach all the cities of Europe how to get up exhibitions of industry, accepted our invitation without being prepared either for our punctuality or powers of display. They expected to find a convenient, even a magnificent building, filled with solid and useful articles of commerce, fine machinery, strong calico, plenty of polished needles, locks, bars, and bolts; but, as regarded the ornamentation of the Palace, that task they fully believed was reserved for them; and many of the Parisian manufacturers calculated, that, as the Exhibition could have neither beauty nor interest without the beautiful contributions from the workshops of Paris, if they were not ready for England, why England must wait for them. The result has been the exact opposite of their expectations. The 1st of May presented a long series of beautiful, combined with useful, manufactures, and would have been just as successful if a temporary curtain had been drawn over the space assigned to France; yet now that the French manufactures are coming out in great force, presenting each day some new attraction, we receive it with all the satisfaction of an unexpected discovery—we feel that we have hit upon a new vein of pleasure, when we thought ourselves already overwhelmingly rich.

On turning toward the French department, after passing the exquisite carvings in white and red wood exhibited by Switzerland, our attention is arrested by a case containing the treasures of the Queen of Spain's jewellery. They amply justify the reputation that Parisian artists in precious stones have so long enjoyed. The leading objects are a suite of diamonds and pearls, arranged with green enamel into a representation of acorns and oak-leaves. The coronal for a head ornament seems to us more beautiful, more a work of true art, than anything in the gorgeous

display in the British Jewellery. Next to these stand the crowns, sceptre, state-sword, and other Royal insignia belonging to the gentlemen who manufactured the coronation jewels for the Emperor of Italy.

What triumph of art manufacture the French may next unpack, it is impossible to guess; but, at present, the crowning glory of the French collection is the case of Froment-Meurice. Among a crowd of exquisitely beautiful articles is a toilet-table (presented to the Duchess of Parma) of buhl, silver, and enamel, supported by silver figures, with a looking-glass surrounded by a frame of enamels of the arms of the two families. Every part of this extraordinary piece of furniture is a marvel of carving, engraving, and sculpture. With the toilet-table are costly sacramental vessels, jewel-boxes, flowers in precious stones, hunting swords, and such a series of exquisite and fantastic designs worked out in precious metals as we never remember to have seen collected together as the property of one person before. The times of Benvenuto Cellini seem revived in this display. On a future occasion we shall give illustrations and detailed descriptions.

French Jewellery is all stamped with a mark which denotes to those initiated the exact value of the gold employed. There is a first-class, second-class, and third-class stamp, which the manufacturers are obliged to obtain before offering their wares for sale. The advantage to the manufacturers of first-class articles is great. They are secure against the competition of those who could imitate their latest productions in an inferior kind of gold.

We have no such regulation. Pure gold, which is seldom used for ordinary jewellery, bears the Hall-mark; but in what is commonly called "jeweller's gold," there is between one maker and another a difference of value, without any perceptible difference in appearance, equal to at least fifty per cent. No doubt, the French regulation is a great protection and encouragement to the manufacturer of good articles in tasteful shapes; but our manufacturers of cheap jewellery at Birmingham and elsewhere carry on their operations on so large and so rapid a scale, that it would be impossible to introduce such a restriction without seriously impeding their trade.

The imitation jewellery displayed by the French in the South Bay is



1.—THE TRANSEPT OF THE CRYSTAL PALACE ON THE 1ST OF MAY.

The northern bays of the French division are devoted to fire-arms; great numbers, and profusely ornamented; to surgical instruments, anatomical models, to philosophical instruments, and costly scientific clocks, which deserve separate notice and illustrations; and to machinery, which is not yet sufficiently arranged to enable us to do justice. We are disappointed at not seeing more Parisian furniture. We think that a room completely furnished up as some Parisian *boudoirs* are, would have rivalled the Austrian suite in attraction, and proved a profitable speculation to the proprietor.

Thus, the iron ore, from which is made the celebrated Wootz steel, with many manufactured specimens: the corundum, not only in its pure and transparent state as ruby and sapphire, but in its rougher form, and the material from which all the best kinds of emery are obtained; mica, used for various purposes: these and many other minerals will be found; but it may, perhaps, be advisable to refer again to them when the arrangement of the collection is more perfect.

Next to the coal and iron may be mentioned the abundance of the most important products of Austria, the various kinds of clay used for the manufacture of bricks. A picture, showing the process adopted at Vienna, in one of the largest establishments of the kind known, will be interesting and useful as illustrating this subject. The sands used in Austria in the manufacture of glass; garnets, also Bohemian garnets, of which a number are shown, and garnets of various sizes obtained in enormous quantities from the great mine of Garnitz in Poland; various metallic substances, and ores used more or less directly in obtaining colour for the artist and the porcelain manufacturer; a number of building and paving stones; a considerable variety of imitative marbles, stones, and artificial pumice stones, and a great number of articles pointed out as adding to the interest and value of the Austrian series, and showing fully that the selection has been made. Lastly, in mentioning the Austrian minerals, we must refer to the produce of the remarkable and well-known quills

Another new article of food is also exhibited—the plantain meal—which the Indians use; and our settlers calculate it may be made to produce a gross return of £112 per acre! Well may Europeans be surprised

as Humboldt says they are, upon arriving within the tropics, at seeing the small space of ground that keeps an Indian family.

The juice of the cow-tree, sometimes used as a substitute for milk, is perhaps more valuable as one of the numerous materials for India-rubber. The phytolite put in common use by the natives is one of the hundred vegetable medicines of the American forests, well worth further study. There is here, also, a species of *Jesuit's bark*, of far greater importance, considering its dearness almost prohibits its proper application in our hospitals; and this, also, is well known to the Indians.

But the most valuable articles exhibited from Guiana are the woods originally made known to us by native experience. For ship-building, they are certainly superior to oak and teak; and the bright colours of the specimens strongly recommend them for furniture. In regard to ship-building, it is a curious fact, attested by Sir R. Schomburgk, that one tribe in particular, the Warraus, have been famous builders of canoes and corials, the durability and speed of which far surpassed any boats from Europe. They made a class of launches, carrying from 60 to 70 men, celebrated in the late revolutionary wars. The timber they selected, the mora tree, is now acknowledged to be the very best for the purpose. Specimens of it are in the Exhibition.

A more primitive canoe is there, also, made of the bark of a tree, quickly constructed, of extremely light draught, and portable. Its convenient use in this last respect carries us back to the days of our most



2. ARTICLES OF COTTON-MACHE. BY J. HART.

primitive forefathers, when the wicker and skin boat, to be still seen on the Wye and in Ireland, was easily borne on the shoulders of the adventurous waterman when obstacles impeded his navigation, or he wished to surprise a neighbour at a distant stream.

In this collection, too, may be seen the original *hammock*, which we have so extensively adopted at sea, and which in France is wisely used in crowded rooms, from which it can be removed by day to purify the air of sleeping-rooms or schools. It is interesting to know that the Indians make their hammocks of extraordinarily strong textile materials, new to us, and of excellent cotton. Not is it less interesting to learn that

adopted our usages. From Nova Scotia samples of wheat grown by Indians are sent of the same respectable weight (64 lb. 11 oz. to the bushel) with the weight of the farmers' wheat. The Sioux saddle and hunter's belt, wrought by an Indian maiden, sent by a citizen of the United States, is entitled to be accounted a work of "honest housewifery," quite as much as the carpet wrought for our gracious Queen by the 200 English women. So the New Zealand chief, Tao Nui, who sends his contributions through his London agent, Mr. Gillman, surely has ceased to be an uncivilised man. These contributions are, however, thoroughly

the sugar of Guiana, of which many specimens are exhibited, has furnished the native people with one comfort from us which they appreciate. They now grow sugar for domestic use; and the cane they cultivate is universally of the kind introduced by us from the French. Cook found it in the South Seas, Bougainville carried it to Mauritius; and thence, by way of the French West India Islands, it has spread, within about seventy years, over the civilised and aboriginal Western World.

These Aborigines, then, can adopt our improvements. They possess, also, the elements of the potter's art, which usually denotes a decided advance from savage life. The mere savage is content with what nature has provided to put liquids in—a sea-shell, a gourd, a part of an egg. The Indian of Guiana manufactures his buck-pots of clay; and a specimen of them may be seen here. In a new edition of Murray's beautiful "History of Pottery," the catalogue of such utensils, from those of Egypt to those of Peru, should be enriched from well-authenticated examples such as these among Aborigines.

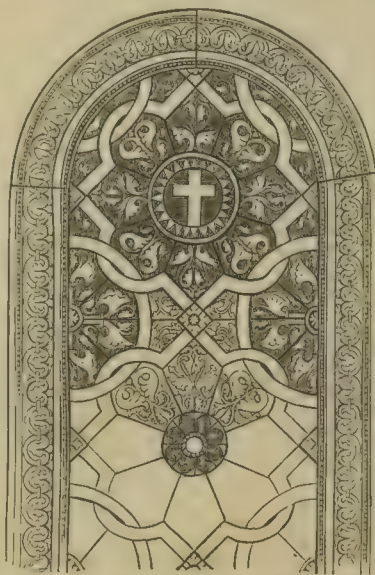
In some instances the Aborigines are here proved to have completely surpassed us. From Nova Scotia samples of wheat grown by Indians are sent of the same respectable weight (64 lb. 11 oz. to the bushel) with the weight of the farmers' wheat. The Sioux saddle and hunter's belt, wrought by an Indian maiden, sent by a citizen of the United States, is entitled to be accounted a work of "honest housewifery," quite as much as the carpet wrought for our gracious Queen by the 200 English women. So the New Zealand chief, Tao Nui, who sends his contributions through his London agent, Mr. Gillman, surely has ceased to be an uncivilised man. These contributions are, however, thoroughly



3. STAINED WINDOW. BY GIBSON, OF LANCASTER-POST-OFFICE.



5. ORNAMENTAL FURNITURE (LEISTLER), AND EAU DE COLOGNE FOUNTAIN.



4. STAINED WINDOW. BY GIBSON, OF NEWCASTLE.



PORTION OF WINDOW NO. 3.



PORTION OF WINDOW NO. 3.

Aboriginal "specimens of New Zealand woods, gums, and bark, flax and flax manufactures." The same conclusions may be drawn in favour of the capacity of the North American Indian to adopt our usages, from the model of the house of the once wild Carib, the cannibal of Columbus, with every household convenience most minutely represented. The easy chair, the wax tapers, the table, the tinder-box, the old man's modern bed, as well as the aboriginal hammock, various musical instruments, various cooking utensils, the sugar-press, cassava-pot, the grind-stone, the nest nest, even the grog-can and a hundred other articles are there, to show the profusion of comforts which civilisation produces. And yet this is the race, thus making progress under a little protection, to which we often refuse common justice, and then we wonder that they flee to the bush. This little Indian picture of civilised barbarism is a lesson that should be perpetuated by such a simple work being, by and by, deposited in the British Museum, if the Exhibition must be broken up.

The models of Guiana native dwellings, also, are very interesting, as furnishing, in the abundance of their domestic comforts, some guarantee for their permanence in one place, so that they have clearly arrived at a condition beyond that of nomadic life. Other South American models are to be seen in the Exhibition; for instance, there is one of a native hut in the Brazil department, although none, as far as we could find, of the far more curious flying bridges which span the awful abysses of the mountains, Mexico and New Grenada, Chili and Peru, are no longer subject to civil disturbance so continually, whatever may be the case with Central America, but that their engineering wonders of that character, from very old times, might have been produced with advantage.

Western Africa offers articles so various in kind, so abundant, and so valuable in commerce, that, when compared with the barbarism of the people, they irresistibly compel the admission, that trade alone does not solve the problem how men are to be civilised,

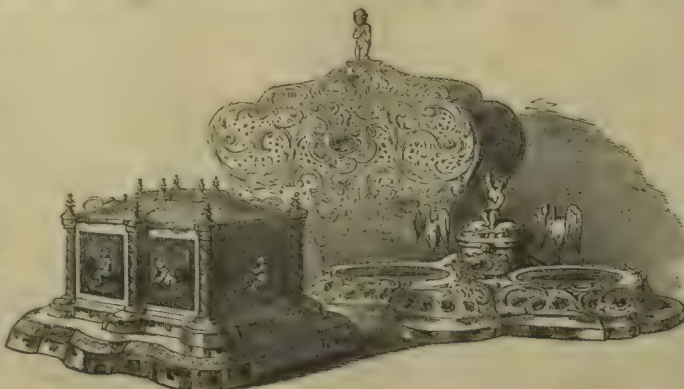
These Africans, in particular, are most active merchants; and they have one usage which should strongly recommend them, as it furnishes a proof of their respect for honest dealing. If a bale of goods is not found at its place of destination to answer the sample, it may be returned to the broker, who is bound to get compensation from the original seller to the purchaser. The specimens of cotton, both raw and manufactured, from this region, are numerous. The plant grows everywhere;

and if our best sort shall be found worth substituting for the native varieties, the habits of the people are prepared for its adoption.

The pottery works are very various, although calabashes, or vegetable vessels, are common. Dyes and medicines are abundant; and it is to be noted with regret, that poisons are familiar to the natives for the worst purposes. One article of export collected by the rudest people of West Africa is of great value, and it has an interesting history. This is palm oil, the import of which has increased since the abolition of the slave-trade, from a small amount, to more than 30,000 tons a year, worth more than £200,000. This new African trade in a legitimate commodity is interesting, as a proof of the correctness of judgment in one of the earlier friends of Negro emancipation, whose very name has been forgotten in the long catalogue of the friends of that cause. Mr. Thomas Bentley, of Liverpool, a predecessor of Sharp, and Clarkson, and Wilberforce, was sagacious enough to perceive, and bold enough to maintain, when a merchant in that slave-trading port, that some articles existed in Africa more suited to the conscience and commerce of England than Negroes. He told his fellow-townsmen that they should send their ships, not for slaves, but for palm oil; and now it is for Mr. Thomas Bentley's palm oil that the very fleets are sent, which, but for the efforts of such men as he, would still be groaning with human victims. This good man became the partisan of Wedgwood, in the famous pottery, to the beauty of which his excellent taste secured their most successful character.

From Western Africa there has also been sent to the Exhibition the small leather bottles of dye for the eyelids, which along with other like usages have been cited to prove the assimilation of the Negroes with ancient Egypt. The real aboriginal products of both regions are well worth comparing together, in order to illustrate the question.

But the superior condition of modern Egypt, in point of progress, has led its exhibitors to confine their contributions too much to the result.

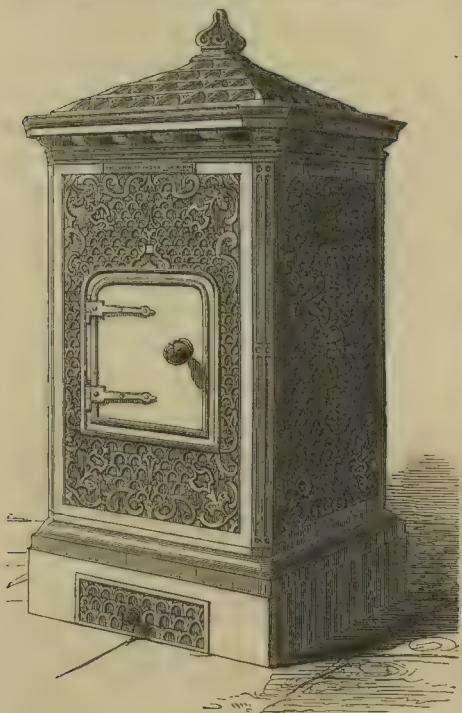


6. GROUP OF OBJECTS OF VERTU. BY WERTHEIMER.



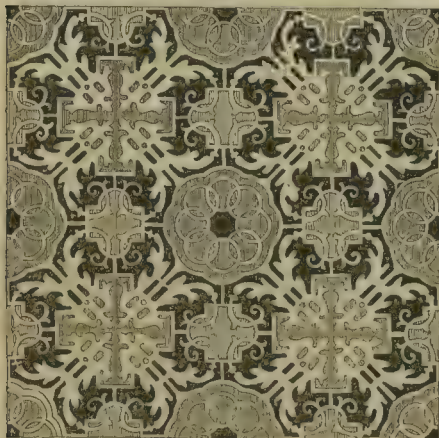
7. BRULE-PARFUM. BY GUEYTON.

civilised industry. Indeed, not only Egypt, but Tunis and Algiers, to judge from products thence on this occasion, must be excepted from the class of barbarous states, more absolutely than it is to be feared is consistent with the real conditions of a large portion of their people. Their contributions are chiefly showy silks and woollens; but, as is betrayed in the case of some articles from Algiers, to which the prices are fixed, their dearness really detracts much from their value, paradoxical as this remark may seem. In truth, a barbarous method of manufacture renders cheapness impossible, without in the slightest degree improving quality. The example shows how indiscreet has been the refusal of the Commissioners to let prices be set to all the articles exhibited.



10. HALL STOVE. BY MESSRS. HAYWOOD, OF DERBY.

In one Tunisian article, barbarism, and the cause of its duration, are abundantly demonstrated. This is clear in the Arab's tent. Snug enough it is, and by its lowness easily sheltered from the wind, and even the sand-waves of the desert. Its camel's hair roof, too, is doubtless water-tight, but it marks the nomade man; and beyond all doubt the people whose voluntary habit is to wander, is scarcely less incapable of intellectual



13. DESIGN FOR TILE PAVEMENT. BY J. W. PAPWORTH.

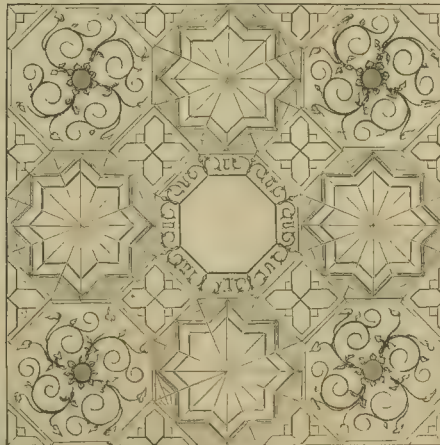
and social culture than the more unhappy beings who, like the Indians of North America, are perpetually moved from home to home by the tyranny of their white invaders. It is probable that the principal cause of the unshod barbarism of our gipsies is their life of strolling. The Cape of Good Hope has sent one article deserving special notice—the ivory of an elephant's trunk, of 163 lb., which must be a fine specimen.

cimen. Ivory is chiefly bought of the natives; and, from Mr. Gordon Cumming's account of his own trading, its mystery may be interpreted to mean extraordinary hard dealing on our part. He had carried into the interior muskets, for twenty of which he had paid £16, and obtained ivory in exchange at a profit of 3000 per cent., which, as he was informed by merchantmen, was "a very fair profit." To be sure, the



8. GROUP FOR A FOUNTAIN. BY M. ANDRE.

manner in which the black chief, of whom he bought the ivory, had obtained it, by oppression inflicted on the Bushmen who killed the elephants, invites little consideration for that chief; but the whole story furnishes a fresh argument in favour of the civilisation which we consumers of this beautiful product of the desert are bound to use all means to substitute for its existing barbarism. The South African assortment of karosses, or cloaks made of the skins of wild animals skillfully dressed, ostrich feathers, and ivory, represent the Aboriginal produce, for which the Cape traders carry into the wilderness to the native tribes, beads of many colours and sizes, brass and copper wire, knives and hatchets, clothing, guns, ammunition, &c.

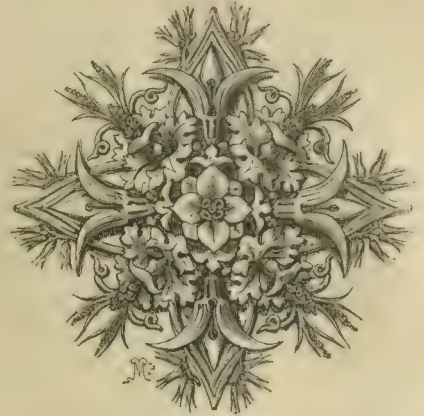


11. PARQUET FOR FLOORS, FROM RUSSIA.

There is a melancholy tribute paid in the Van Diemen's Land contribution to its now extinct Aborigines. In our forty years' possession of that settlement we have utterly destroyed them, by as atrocious a series of oppressions as ever perpetrated by the unscrupulous strong upon the defenceless feeble. Yet these poor people had tastes and industry too. Their bread appears to be worth reviving as a new truffle for soup by the gourmands of Hobart Town. The specimens of the root exhibited weighed 14 lb. They obtained a brilliant shell necklace by soaking and rubbing off the cuticle, and gaining various tints by hot decoctions of herbs. They procured paint by burning iron ore, and reducing it to

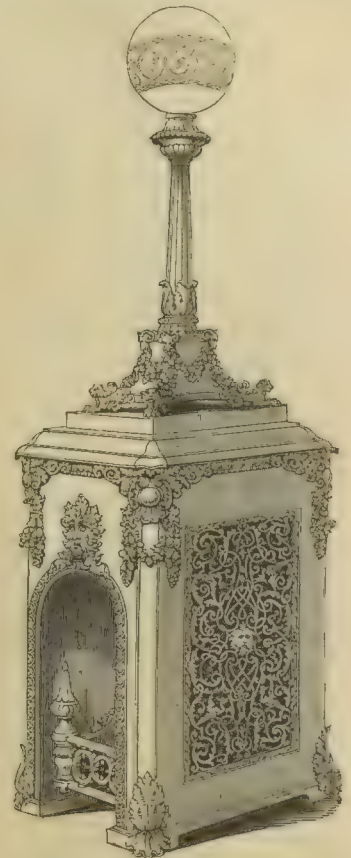


14. PATENT ORNAMENTED GLASS. BY W. KIDD.



9. CARTON PIERRE ORNAMENT FOR A CEILING. BY JACKSON AND SONS, RATHBONE-PLACE.

powder by grindstones. They converted sea-shells and sea-weeds into convenient water vessels; they wove baskets, and they constructed boats with safe catamarans. All these things are exhibited. Surely, then, the men whom their greedy suppliers admit to have done this, and whom



12. HALL STOVE. BY MESSRS. BAILY AND SON.

the least possible pains ever bestowed on them proved to be capable of much more, ought not to have been hunted down, as we know they were, and then almost inveigled to be shut up in an island too small for even the few remaining.

The New South Wales contributions offer no sign of the Aborigines' works, and probably the country contains no longer any trace of the



15. DESIGN FOR TILE PAVEMENT. BY W. A. PAPWORTH.

people: as Newfoundland contributors do not pretend to an interest in the works of the lost people who once inhabited it. New Brunswick seems to have nothing to show but the pretty models of an Indian family, the kindness of whose character is attested by having protected two maiden ladies, whose father emigrated from the United States after the American war, and settled among the tribe some 70 years ago. The

remnants of the Indians and the remains of the Royalists must have had many subjects of sympathy, and many feelings in common, to have maintained so long a career of mutual respect.

The subject will be resumed, more particularly in reference to some contributions alluded to, which are not yet arranged. The whole amount, however, of Aboriginal articles to be exhibited is likely to be smaller than what would certainly have been, but for circumstances deserving notice. Of late years the political condition of the Aborigines connected with various civilized nations, has been a subject more than usually interesting to the public. The emancipation of our Negro slaves in 1834 having in a great measure settled that question, the attention of philanthropists was free to be directed to the persecutions suffered by the Aborigines of our colonies. This was an extensive inquiry, and some reforms took place. Then a reaction occurred; until at length the old law of force and oppression extensively recovered its influence. In this state of things the Exhibition was planned, upon the principle of an universal invitation of the nations of the earth to bring specimens of their industry and art under a common inspection.

The Commissioners made no exceptions; but it was impossible that they should grant a privilege, or any special advantage, even to the least favoured in actual condition. The collection of articles to be exhibited was necessarily left to the skill and activity of the contributors and their various supporters. Various ranges were taken care of by people, Germans of not adroit and unscrupulous managers, whatever equality of capacity may be conceded to them, and however acute their natural intelligence. It is an occasion, however, upon which the Aborigines' protectors ought to have seized with eagerness, in order to bring evidence of that natural intelligence and equal capabilities in visible array before the world when so favourably disposed to allow all their due.

HEAT, AND ITS APPLICATION.

THE applications of heat, and the adaptation of contrivances for its generation and control, naturally deserve in this variable climate a full attention. In the Building itself, the regulation of heat demands consideration, and extensive contrivances have been used for securing the ingress of cool air, and the egress of that which has become heated. Now, all ventilation is founded upon the simple principle, that cold air is heavy and subsides to the bottom; whilst hot air is light, and rises to the top. At first sight it may appear, that, for the purpose of ventilating any building, it is only necessary that holes should be placed at the bottom of the apartment for the air to enter, and other holes be placed at the upper part for the hot air to escape. Practically, however, ventilation is far from being so simple an affair; and if there is anything more difficult than another for a scientific man to accomplish, it is that of causing currents of air to obey his will, and take that course through any building, and with any velocity, which he may desire. From experiments which we have instituted, we apprehend that the satisfactory ventilation of the Crystal Palace is a matter of very great difficulty, from the interference which the cooling surface of the glass will naturally have on the heated air as it ascends. In a chill night the chilled air falls sensibly from the roof, and at all times it must seriously interfere with the operations of the scientific ventilator; and hence it may possibly turn out that the mass of openings which Paxton has so admirably placed round the base of the Building, together with those of the upper part, will be insufficient to ventilate without draughts. We advise, therefore, our friends not to postpone their visit until the heat of a summer sky shall strike with full force upon the Building. We noticed, a few days since, that the air was entering at the galleries at apertures through which it should have made its exit. Whatever may be the difficulties, there is no doubt that they may be satisfactorily remedied by those who have made the physical forces obedient to their will, and obtained the result which has been shown within the Building.

Many persons believe that they have caught serious colds in the Building; but we attach no importance to this belief, because an epidemic of influenza and sore throat has been very prevalent this spring, and those who have been afflicted at this particular period are quite as likely to have contracted their malady elsewhere as in the Building.

Amongst the ventilating contrivances which are exhibited, the glass pane with small fissures must be noticed. Wherever we have seen it employed it has only favoured the entrance of air, and not promoted its exit, but it must be regarded as a useful appendage in some cases.

We detected one or two of Arnott's ventilators; but their remarkable paucity has much astonished us. The principle by which they act is that of closing with a very slight force acting over a large surface; and it is very amusing to observe how lively they become in south-westerly winds, when there is a tendency to a downward current. We cannot speak too highly of the simple invention of this accomplished physician, and doubtless some modification of this device will be employed for many generations.

The production of heat in this country is almost exclusively accomplished by the use of coals or gas, which are allowed to combine with the oxygen of the air. Wood fires are found in these densely populated countries so expensive, as only to be allowed to be used as a luxury of the rich. It is fortunate that in this climate nature has provided us with an ample stock of coal to cheer us in the dreary winter months, and at several departments some beautiful specimens of coal may be seen. Some blocks of great size are placed outside the western extremity. Coal principally varies in the quantity of volatile matter which it contains. In our mines bituminous coal mostly abounds, and that which is used in London has much volatile matter, which gives a good blaze, makes a cheerful fire for an open grate, but has the disadvantage of giving off copious blacks to form a canopy over the metropolis, and cut off from the inhabitants a large share of that light of day which is due to them. In the United States, on the contrary, the coal contains less volatile matter; hence it burns with little flame like coke, and generally requires close stoves for its combustion. A very interesting specimen of coal from the Lonscoring mine, in Maryland, is exhibited, which is intermediate between the anthracite and bituminous coal, and contains scarce a trace of sulphur. It is well worthy the attention of all interested in the production of heat. It is known to geologists that this field of coal is very large. The Lonscoring mine, from whence the specimen is taken, belongs to a number of gentlemen of high standing in Paris, London, and America; but our attention has been drawn by one eminent City gentleman to the fact, that Mr. Detmold calls himself proprietor in the Catalogue. We trust this is only a misunderstanding or a misprint.

The production of heat by the combustion of gas is now occupying much attention, and is daily coming into more extensive use. One of the greatest difficulties attending its use is the irregular pressure of the gas; and at night, when the companies think that the majority of the population are asleep, and the pressure is lowered to the lowest possible amount, and we have found in experiments conducted by gas, that the light has occasionally gone out. The question of economy between the use of gas, coals, and coke, must be determined for the purposes for which they are employed; but, as a general rule, from actual experiments which we have tried, gas is much more expensive than the other materials where long-continued heat is required.

From the nature of the fuel, we are led to consider the contrivances in which the fuel is burnt, and the Exhibition is particularly rich in stoves of various denominations. For ordinary dwelling apartments great advances have been made in modern times, the tendency being to place the fire almost level with the feet, with the unsightly ashpit completely concealed from view. These stoves, whilst they are in the highest degree elegant, are costly in their construction, and great care should be taken that they be not placed sufficiently near any woodwork to cause its ignition. We remember to have seen Sir Robert Peel,

within a few days of his death, studying one of these stoves with great interest, at the *salon* of the Civil Engineers, and he took away one of the papers with him to study it more at ease.

We cannot, however, recommend any one to be without this form of stove; for the heat being applied at the very bottom of the room, is diffused more generally through the apartment; and the lower parts of the body, which, with long sitting, are so particularly liable to feel cold, derive warmth more readily than with the ordinary grates. These stoves are furnished with bright, reflecting surfaces, to throw the heat into the room; and in one case we noticed the fire-place to be placed about the focus of a parabolic reflector, which distributed the rays of heat in a parallel manner.

In our opinion, the simple radiating and reflecting stove is incomparably superior to any other form for rooms in which persons ordinarily dwell. There is a form exhibited by Mr. Pierce, which he terms the pyro-pneumatic stove, which has not only an open fire-place, but which has a contrivance by which air is admitted from without and circulates through the room. The objection we raise to all these stoves is the effect which they have in causing currents of over-dry air to pass through the apartment, and which have somewhat the effect of a blighting easterly wind. The regulation of the moisture of the air by such contrivances is possible, but difficult; and, therefore, upon local grounds, we do not recommend them for ordinary dwelling apartments. For churches, halls, and other places where extensive areas have to be warmed, and the room is only used for a short time, they may, doubtless, in many cases, be adopted with advantage.

We must consider, for many reasons, that any close stove is perfectly abominable for dwelling-rooms. In the first place, the blazing fire is lost to view; then, the radiant heat, acting upon the skin in a cooler room, has a different and more salutary effect than warmer air without the radiant heat. In America, however, close stoves are mostly employed; and we were, therefore, curious to observe what our Transatlantic brethren have produced. From conversations which we had with Americans, it appears that a considerable majority of stoves in America are upon the closed principle; but still those exhibited are not of the kind ordinarily employed in that country.

The chandelier parlour stove, which received the gold medal, is exhibited, and it is principally employed with anthracite coal. To English notions such stoves would be considered intolerable; but the Americans declare that they would not use our stoves and bituminous coal, with the copious showers of blacks which pour from every chimney, on any account. They state, however, that open fireplaces, with anthracite coal, are now being employed, and that they like the appearance of the burning mass much better than the fire which they have observed in this country. The Americans bitterly complain of the soot which is carried over everything in English cities; and they further state, that the smell emanating from our coals can be immediately recognised by them.

The kitchen ranges are almost innumerable; and, certainly, by their combined action, with a Saver at each, thousands might be dined from those exhibited. They may be divided into two classes—those which have open fires, and those which have close grates. The latter kind of stove is virtually a furnace, and, upon that account, in our opinion, should only be trusted in the hands of the skilful cook. Of the other kinds, although we gave them a careful examination, we dare not venture any opinion, as their excellence depends upon such niceties, that any person who wants a kitchen stove had better get testimony from the cook than the philosopher, and upon no account trust to the simple statement of the manufacturer, each of whom considers his own child the best.

For culinary purposes the use of gas is daily increasing, and Mr. Defries has carried out the palm for stoves designed for its use. The most complete contrivances which we have ever seen for gas-cooking are those which have been erected for the Marquis of Westminster, at Eaton-hall, by Mr. Potter.

We are not quite convinced about the economy of gas for roasting, but it should be remembered that there is no waste, that the gas could be turned on when wanted, and turned off when the operation is finished; and we feel bound to state that some of our first practical men have the highest opinion of gas ranges. If the gas companies can make hydrogen and carbonic oxide as cheaply as is stated, there is very little question that gas-stoves could supersede the other forms. We wish we could persuade one company to supply the gases for heat, and the other the gas from canal coal for light. For boiling, stewing, and baking, there can be no question of the economy of gas. Whilst speaking of Mr. Defries' stoves, we must not, at the same time, omit his gas-bath. It is a useful and economical application of that material, and will enable hot baths to be used extensively in the houses of the middle classes.

With regard to gas stoves for heating, such as Deane's cylindrical gas-stove, Edwards' atrophy stove, they admit of being used in any case; cannot be employed; and in other cases, where stoves have only occasionally to be employed, they may be conveniently adopted; but in all instances where a high temperature has to be maintained, or the heat has to be kept up for a long period, their employment is too expensive to be generally used. We desired to heat a hot-house by this plan, and the gas company laid down a pipe for that purpose; and we found that the great consumption of gas was such, that we were soon glad to return to coke.

Mr. Strophe has contributed one good gas kitchen-range; and a workman in Mr. Feetham's employ, to the honour of that amiable manufacturer, has been allowed to exhibit a stove adapted for either coke or gas.

We are much pleased with the American cooking-stove, called the Union, as it appeared to us to be a very economical mode of applying heat. With regard to different nations, we should hardly consider that the tropical countries would have furnished specimens of stoves, and none are accordingly sent.

Belgium, whose manufactures of iron are extensive, has contributed several stoves, and Austria has also shown some cooking apparatus. The Russian manufactures have not yet developed themselves, and we shall look with interest to see what contrivances which these people adopt to give warmth in their frigid climate.

In this article we have nothing to do with the designs, and therefore we shall simply mention that they are throughout the English department of surpassing beauty. So costly, in fact, have they been in some cases, that an article is said to have entailed an expense of £1000. When the visitor inspects this section, he will doubtless be astonished at the variety of design, and the astounding number of beautiful articles which are exhibited.

Misses Knight have shown the best gas burners for chemical purposes. In all our London laboratories, the greater part of the operations are conducted by means of gas.

We were glad to observe, that, besides the display of drawing-room stoves, which have been got up in so costly a manner as hardly to fall within the means of the middle classes to acquire, a stove for a cottage has not been forgotten, and a most excellent one has been contributed by Mr. Nicholson, of Newark-on-Trent. It appears that Mr. Leslie, by a patent taken out some time ago, claims all forms of stoves without bars at the bottom, and hence this stove falls under his patent. To those who have been in the habit of visiting the continent, the poorer classes, the necessity of a good economical stove will readily be apparent. The stove before us appears to be of this character, for the fire-place is so small as to admit but a limited amount of coal, whilst the existence of an oven and a boiler must greatly tend to the comfort of the industrial classes. If the stove is really as practically good as it looks, we should rejoice to find it in every domicile of the artisan. The stoves now to be found in the homes of the poor are chiefly, according to our experience, old bed-room stoves, and can be purchased at seven or eight shillings. The stove is about two pounds; but we beg the landlord to consider the tenant's comfort rather than the small extra cost in the first building of the cottage.

Misses Deane have exhibited Hazard's heating and ventilating apparatus. It consists of a close stove, with pipes carried backwards and forwards from it till they come to the chimney. In the use of this apparatus the pipes must be joined very truly, or smoke is liable to escape into the apartment. In a philosophical point of view, it is found that for heating air it is very undesirable to place pipes over each other.

In the wash-room there is a contrivance called Green's patent fuel economiser. It consists of a series of tubes, which pass into the chimney; and thus the heat, which would otherwise be carried off, is imparted to the water, which can be used to supply the boiler. Attached to the pipes is a very pretty contrivance for scraping off soot. The same party shows a means for warming air, by pipes placed

in an ordinary chimney, which communicate with the outer air. This scheme is objectionable, because the hot air is let into the upper part of the room, and is already too much heat is apt to collect. If any of our readers have never tried the experiment, we should advise them, especially if they burn gas, to mount a pair of stoves, and ascertain the state of the air at the top of the room, and they will be astonished at its high temperature and noxious qualities. This plan would answer admirably to warm a room above that in which the fire is.

Amongst the machinery the visitor may notice contrivances to warm cylinders in certain parts by steam. All these matters we shall hereafter consider in detail. They may also notice a gassing apparatus, for removing the fine particles which adhere to thread.

The generation of steam from heat becomes an important consideration with engineers. They are, however, pretty generally agreed that the heat should be applied over a large surface. Those of our readers who have never inspected the interior of a locomotive, will now have an opportunity, and there they may observe the numerous tubes which pass completely through the boiler from end to end. The object of the tubes is to allow the heat from the fire to act upon a large surface of water, because the whole draught of the fire is compelled to pass through them before it can reach the chimney.

In apparatus for distilling, the French have contributed by far the largest plating still, for the distillation of sulphuric acid. In this country, where so much of this acid is made, the manufacturers might have sent one of their large stills; and, doubtless, Messrs. Johnson & Harrison, might have contributed some astonishing ingenuity of platinum; but, as we have only to do with objects exhibited, we must award to foreigners the first place in this department of manufacture. In earthen worms our potters have contributed the largest specimens.

We must not omit the mode in which sugar is evaporated in vacuum pans, at a low temperature. It is well known, that the less the barometric pressure, the lower is the boiling point. On this account, the monks of St. Bernard never make their tea with boiling water, because they reside so high an altitude. By beautiful application of science, the sugar-bakers exhaust their evaporating pans; they diminish the barometric pressure, and thus are enabled to boil at a very slight increase of temperature. Messrs. Pontifex and Wood have shown the best apparatus of this kind.

With regard to manufactures dependent upon heat, the Building itself is one of the wonders of the world. When its almost countless rows of iron pillars are observed, the mind cannot fail to think of the tons of coal which have been consumed, and the Pandemonium-looking flame which must have issued from the furnaces in the smelting of the iron. Again, when we see the immense quantities of glass, the furnace again comes to mind; and a model of a glass-house by Hartley, together with the melting-pot in which the glass is fused, is exhibited at the extreme eastern part of the Building. In former Numbers we have already stated that the glass of the Building was made by Chance, of Birmingham. Amongst other applications of heat the visitor may observe huge earthen pots, and the more delicate specimens of porcelain. We have amongst castings the enormous hydraulic press which raised the Britannia Bridge, and the delicate Berlin castings. Perhaps, however, as far as novelties are concerned, the castings of zinc are as remarkable as anything in the Exhibition; and, therefore, that metal was not thought susceptible of being thus used. There is no brass casting so large as that of the Wellington statue at the top of the marble arch, though there are cannons and other brass castings displayed over the Building.

We do not think it at all necessary to call attention to the various culinary utensils by which heat is applied to our food, and which are exhibited in great profusion. There is one, however, that deserves to be noticed for its name, as it is called the anhydropesterion, and is really a potato-cook without water. Such a gentle name for a gentle London cook to pronounce tickled our ears mightily, and we can imagine a page giving instructions to the cook to put the potatoes into the anhydropesterion in good time for his master's dinner.

We have various examples of contrivances for quenching fire, which, perhaps, are pretty necessary in such a building. From Canada a very showy fire-engine has been brought, and we are very curious to test its powers against our large fire brigade engines, which are of such service in London. In the dry atmosphere of America fires are very common, and, therefore, it affords a most interesting example of such contrivances of fire-engines, Philadelphia fire engine, and a small one, is shown, and is ready for use on any emergency. Instead of pumping water, an incombustible gas is discharged against the flame, which it quickly extinguishes. There is no doubt that it will instantly extinguish flame, but we fear that it would not be sufficient to cook a large bulk of red-hot matter; at any rate, the fire brigade of London continue still to throw their volumes of water whenever a conflagration occurs.

Fire-escapes are abundantly represented; but continuous balconies and a trap-door at the top of the house are, to our mind, the best security against the ravages of flames. Mr. Walby has exhibited his escape; there are also dressing-table fire-escapes, ash-bar fire-escapes, and numerous contrivances about the Building, which, doubtless, after the sad loss of life last Saturday, will be inspected with great interest.

Various contrivances to protect books, papers, and valuable documents against the ravages of fire are exhibited at the Building. They resolve themselves into two classes—those which resist the action of fire from being non-conductors of heat, and those which give off a gaseous material. The best specimen which we have seen is manufactured by Mr. Chubb, of St. Paul's Churchyard. Its case contains such an extreme thickness of non-conducting matter, that we should not hesitate to trust any document with it, no matter how important, in any moderate fire. We do not imagine that in fires like that of Fenchurch-wharf, where the iron girders melted, any iron surface would effectually protect combustible material. Some iron safes are also shown in the Foreign department.

Measures of heat are not perfectly well represented. Thermometers, as our readers doubtless know, are principally made in London by the Italians, and very few which are made are sufficiently accurate for scientific purposes. With respect to the few which are shown, we do not pretend to speak of their worth, which can only be ascertained by experiment. In the American department, a person exhibits the stand of a pyrometer, but the instrument itself has not arrived at present. As far as works are concerned, the dry and wet bulb thermometer made in one stem, by Mr. Negretti, deserves the highest commendation; and, if the accuracy be equal to the excellence of construction, it must be regarded as one of the most wonderful pieces of glass-work in the Exhibition.

Taking a review of the entire application of heat, we must admit that the phenomena are not as well represented, in a scientific or educational point of view, as they might have been, with a little management on the part of the Executive. Nevertheless, in its leading practical applications—whether we regard the Building, or the world which has led its origin in the furnace, or whether we regard the phenomena which are exhibited—there can be no question that it is the most astounding collection which the world has ever seen. The three great forces, electricity, light, and heat, have contributed their full resources to the World's Fair; and, in recording the manner in which these forces have been obedient to the will of man, there can be no question that the advancement of the nineteenth century is truly surprising. The philosopher must continue his labours, the manufacturer must not take advantage of the discoveries of philosophy; and, if we only consider the same rate of progression, fifty years hence the rich may enjoy increased luxuries, the poor, additional necessities, and all classes will have further means of enjoyment, of which at the present time they have no conception.

THE ENGRAVINGS.

1.—GLASS FOUNTAIN. BY MESSRS. OSLER.

(Engraved on front page.)

This magnificent production, which stands in the midst of the transept, forms a prominent feature in the coup d'œil which meets the eye of the visitor on first entrance at the south door, which, on nearer inspection, produces a grand effect by the brilliant colour, radiating from the various angles of its surface, and the burning colour of water contained in flowing and playing over it. This fountain rises to the height of 27 feet, and is composed entirely of pure flat crystal, cut into the most elaborate forms. The stalks to the overhanging projections are cut in prisms; the latter, supported by spiral pendants, are represented in the result of crystalline droppings. The superior flint, which is of marble, is supported by a base of glass and adorned with shells, introduced with excellent effect. The water falls in three separate

14.—PATENT ORNAMENTED GLASS. BY W. KIDD.
A very elegant piece of furniture; the carving of the frame, and the decorative character of the glass, extremely chaste.

MILTON RECRITIONS.—The Rev. Charles Eyre, on Thursday week, performed an extraordinary feat of memory, at the Music Hall, Store-street. He recited about a fifth part, *memoriter*, of the following scenes:—The first, the debate between the two angels, including the debate in Pandemonium, the adventures of Satan with Death and Sin, and the temptation of our first parents. We have to complain, of his reciter's sometimes corrupting the text of the divine poet; but in general, his eloquent and judicious commentary, and his judiciously chosen and well-ventilated text, sufficiently well demonstrated that the great epic contains many dramatic points which are generally overlooked. Still we think that the recital would have been improved in its effect by the poem having been recited in a rather more rapid and energetic style of action, would have been more aided by the presence of the book, which the absence of it too much obscured.



ROTTEN-ROW, HYDE-PARK

ROTTEN-ROW, HYDE-PARK.

HYDE-PARK, from its "lying high and dry," is, perhaps, the most airy and healthy spot in London. It is an excellent place for walking in, and has a great extent of well-kept paths for pedestrians. Excellent drives, to which only private vehicles are admitted, likewise furnish the means of enjoying carriage exercise; and thus the Park has been fashionable for drives and promenades since the time of Charles II. "It was fenced in with deer fences," says Mr. Cunningham, "from a very early period; was first walled in with brick in the reign of Charles II., and first inclosed with an open iron railing in the reign of George IV. In 1550, the French Ambassador hunted in Hyde-park with the King; in 1578, the Duke Casimir 'killed a barren doe with his piece in Hyde-park from amongst 300 other deer.' In Charles I.'s reign it became celebrated for its foot and horse races round the ring; in Cromwell's time, for its musters and coach races; in Charles II.'s time, for its drives and promenades, a reputation which it still retains, showing, in the London season, from April to July (between half-past five and half-past six P.M.), all the wealth and fashion, and splendid equipages of nobility of the country."

Nor have the equestrians been forgotten; peculiar accommodation having been provided for them in the roadway, known as Rotten-row, where the fine gravel is always allowed to remain loose, so that horses can gallop over it without the least danger from falling. This famed ride lies on the south side of the Park, and extends from the lodge at Hyde-park Corner to the Kensington-gate; and between Rotten-row and the Serpentine is built the Great Exhibition Palace.

We are not aware of the precise date at which this road was formed; but we find it celebrated in Sheridan's prologue to the play of "Pizarro," first produced in 1798:—

Horsed in Chesapeake, scarce yet the gayer spark
Achieves the Sunday triumph of the Park;
Scarce yet you see him, dreading to be late,
Scour the New-road, and dash through Grosvenor-gate;
Anxious—yet humorous too—his steed to show,
The hack Bucephalus of Rotten-row.
Careless he seems, yet vigilantly ahy,
Wooes the stray glance of ladies passing by,
While his off-heel, insidiously aside,
Provokes the caper which he seems to chide.

Lord Byron, in describing the break-up of the London season, thus refers to the locality:—

When its quicksilver's down at zero—
lo!
Coach, chariot, luggage, baggage,
equipage!
Wheels which from Carlton Palace to Soho,
And happiest they who horses can engage;
The turnpikes glow with dust; and Rotten-row
Sleeps from the chivalry of this bright age;
And tradesmen, with long bills, and longer faces,
Sigh as the post-boys fasten on the traces."
"Don Juan," canto xlii., stanza 44.

In May, June, and part of July, between five and seven P.M., Rotten-row is crowded with equestrians and ladies in great numbers, when the scene is very brilliant. It will be recollected that when the site of the Crystal Palace was decided on, it was objected that the frequenters of Rotten-row would be subjected to great inconvenience from the increase of traffic which the Exhibition would bring into the Park. Now that the Palace is built, this inconvenience has not been experienced to any considerable extent; but it has been most unwarrantably taken advantage of "to break up one of the last town encampments of the Dryads, and actually lay open Kensington-gardens for a new ride." This encroachment has very properly taken up by the Marylebone Vestry. At the meeting held on Saturday, Mr. Hume, M.P., stated that "He had inquired what objection there was to the continuation of the drive by the Crystal Palace in Rotten-row, and the only answer was that it was thought the north of the Serpentine would be better. The



EXHIBITION OF THE ROYAL ACADEMY.—"THE RETURN OF THE DOVE TO THE ARK."—PAINTED BY J. E. MILLAIS.

adoption of Kensington-gardens was an attempt on false pretences. It was no more nor less than a robbery on the rights and recreations of the pedestrian public. (Hear, hear.) In the course of the next two or three months, the metropolis would be visited by tens of thousands of pedestrians from all parts of the kingdom, as well as the Continent, and they were to be deprived of the advantages of this, one of the most beautiful spots in the vicinity of London, merely to gratify a favoured few to gallop and ride about a place, to great danger of the lives of the public. But the question was, whether, in appropriating this drive in Kensington-gardens, the Woods and Forests had not acted illegally. By act of Parliament, Lord Seymour had no right whatever to touch the Royal gardens without the consent of the Treasury; and, if so, the noble Lord and his colleagues must be made responsible. He (Mr. Hume) the other night presented to the House of Commons a large petition from Paddington, signed in three or four hours; and, although he only asked Lord Seymour for forty-eight hours' delay, he was refused. He thought in this matter the Woods and Forests had behaved exceedingly ill; and they might depend upon it he (Mr. Hume) would not fail to press the matter with all the power of which he was capable." (Hear.)

Sir Peter Laurie said this ride in Kensington-gardens had no right to have been opened until a vote of the House had been taken. He wanted to know at whose instigation it was opened. There was no man who rode more in Rotten-row than he did; and he had no hesitation in declaring that there was ample room there without this encroachment.

ROYAL ACADEMY EXHIBITION.

(THIRD NOTICE.)

STEPPING southward and westward as well, we come to "A Poet's Study" (443), by Redgrave—a deep glen overhung with trees, in which Coleridge and Wordsworth and Southey are said to have sat for hours and gathered inspiration. Mr. Redgrave has wisely refrained from introducing even one of the poets into the scene, as it will be remembered Edwin Landseer signally failed in introducing Sir Walter Scott into the Rhymer's Glen. In what he has attempted, Mr. Redgrave has succeeded. His trees, however, might have a broader touch without losing sight of the truth to nature. The freshness of this picture is indeed admirable—sufficient of itself to inspire a poet.

Beneath Cardinal Wiseman's portrait is hung David Roberts's large picture, "Surprise of the Caravan," a scene in Syria (464), a well-told story; the picture being full of varied incident, and the character of the country given with a most faithful pencil. Further on is a clever scene, "Dover Hovellers," by Mr. Hollins; and immediately above is the subscription portrait of Dr. Conolly, by Sir John Watson Gordon—a most capital likeness, capital painting. Still more to the right is "Hotspur and the Fox" (487) by Mr. Elmore; a well rendered scene from Shakespeare. The *Hotspur*, full of civet and disgust at the dead body crossing the wind and his nobility, and *Hotspur* all manly contempt at the perfumed fellow. Near to this clever picture is a Pre-Raphaelite folly, by Charles Collins, son of English-coast Collins; and anything, as a whole, further from nature and his father's works, it would be difficult to produce. He calls it "Convent Thoughts," and gives us a nun in a landscape of green, meditating on the works of nature, on flowers and green leaves—painted with a micro-



EXHIBITION OF THE SOCIETY OF PAINTERS IN WATER-COLOURS.—"VESSELS LEAVING THE HARBOUR OF GREAT YARMOUTH."—PAINTED BY E. DUNCAN.

At length the great work-bell rang, and with its first clang the men jumped from their post, and commenced putting on their coats. Some of them, taking up the handkerchief with the saucer bulging out of the bottom of it, set to work eating vigorously, so as to have the longer nap afterwards. But the greater portion of the crew had to wait for the

refreshment man, who came round regularly with his cans and basket. Very few of the poor fellows were ever in sufficient funds to practise the economy of bringing their dinner with them, and Tim was amongst the number. The refreshment-man was a rare fellow for credit, and the empty pocket could mortgage the coming half-crown as deeply as it pleased.

When the white apron and fur cap of the man were in sight, every one ran to meet him. The beer-can was soon emptied, and the basket narrowly examined.

"Now then, just leave them loaves alone, Bill," cried the provision merchant; "a-squeezin' 'em up as if they was putty! This makes one-and-three, Joe," he added, handing one a huge slice of bread and cheese. "Who's for the real luxury and hot potolies? Don't give that Struttin' any more beer—he'll be drunk—that's the sixth pint. Come on, lads. No doing the constrictor dog's, and eating one on a lad. No, I haven't got no mutton-pies; since these here Ostend rabbits come up, there's no getting a cat for love nor money."

"What's the potolies—beef or mutton?" asked a huge fellow, in a fashionable dress coat and red plush breeches, as if he had been a footman.

"You're a-gettin' delicate," answered the refreshment-man indignantly.

"Cookey spoilt you in your last place, a givin' yer the cold chicken as com'd down from the kitchen. Come, no rabbin', you fellows; eat up to keep warm. I shall go cheatin' you. Mind Bob, you've near as fat up your wages, and you'll be askin' for beer by-and-by."

"Can't help it," returned the man, who with his mouth yet full, raised upon a fresh supply. Without speaking a word, he had been eating as hard as he could, with his eyes fixed on the basket as if afraid that it would be emptied before he was satisfied. "I'll have a fill for once; it's kind often as I have to undo my waistcoat after meals."

Many of the men growing extravagant, at finding the credit so easy, ate and ate, until the day's pay was due. Perhaps, for a month or so, they had been living on bread and water, and the very sight of the delicacies in the basket drove away all prudence, their hunger increasing, rather than decreasing, with each mouthful. How the proprietor managed to recollect his debts, was surprising; and, indeed, he might have time arrived, with hands as full as his customers, when any man told him that he was owing him an amount, that they were glad to escape by telling the sum they really owed. For when at four o'clock the day's labour ceased, and the men hurried to the pay-office, the refreshment-merchant, with a small apron, all pockets, like a turnip-knacker, tied round his waist, and bulging out with coppers and small silver-pieces, stationed himself near the gate; and, as each labourer passed by, would take his debt out of the half-crown. It was curious to see the melancholy look of those who were so glutted with gluttony had made them so poor on leaving work as when they began it.

As the ships kept pouring in each day the work at the Docks was brisk and certain. For two weeks Tim had been earning his thirty pence daily, living, too, as prudently as he could, so that he had kept his word, and Kitty's tea-cup had many a silver shilling in it. He could now work against the best man in the place, for his legs had grown used to the exercise through constant practice.

So as to avoid temptation, the weaver, each day when the refreshment-man came round, would walk away, and amuse himself as he eat his food by looking at the shipping. But the vessel that centred the whole of his thoughts, and near which he would linger like a boy at a stable-yard, was one that was shortly to start for Australia. Tim would watch and peep into each packet that went on board as curiously as a wife does into her husband's letters when they are in a lady's hands, and he would watch the hands of a plough would be sticking out of the brown matting that packed it, or the bright ends of spades and hoes glitter through their coarse canvass covering. All these were bound to the land he had set his hopes upon, and how he envied them their journey! As he never missed visiting this vessel, the sailors began at last to know him, and talk with him. Then he would question and cross-question them as an Old Bailey barrister does a witness, only a little more gently.

"Why, only this mornin'," said one, who was his especial companion, "you may get a leg of the primest mutton for sixpence. It's so cheap, they bolt down the sheep for taller. That's summat like, ain't it?"

"And wages?" asked Tim.

"Well, thirty pounds is often given up the Bush, or even seventy; and wimmin, about twenty-five and their rations. Besides, they is more like one of the family, like; they's all lonely up the country. Why, a small wench can get a shillin' a week for minding little 'uns."

"And farm labourers?"

"They's down a little, as the emigrants pour in. A man a year back used to keep a nag, and gallop from farm to farm. They'd ask fifteen bob an acre for corn; and, if the master wouldn't give it, of they'd gallop, and he'd have to give it arter all."

"Nonsense!" cried the astonished weaver.

"Ay, he would, though," continued the man. "Why, bless you, a feller who is a gaffer, he can make a fortune. Turkeys, parrots, ducks, a-lying about like sparrows here. Knock down your ducks, and get twenty shillings a pair for 'em at Wellington."

Tim's eyes opened wider and wider. "And the natives is cannibals, ain't they?" he added, with a look of fear.

The sailor burst out laughing: "No! not half as much as some of 'em here. Don't eat a man up half as quick. Bless you, they're as quiet as a dove, and as off as 'most as quick if they smells powder. Cannibals! He! he! he!"

Bradley felt considerably relieved. His notion of an Australian chief's ladder was truly fearful—with men hanging up on hooks by the legs, like hares; and, perhaps, the old and tough victims salted down for the servants; or a plump baby or two trussed and powdered like a turkey for grand occasions!

Such talk as this always saddened the poor fellow. It was like a hungry beggar looking in at a cook-shop window, sharpening his appetite to no purpose. Tim would smile silently; so intent in thought, that his roguish companions could play all sorts of tricks on him—take a penny box of riddles to pass the evening; and they would sit in a circle round old Tim, each with a conundrum, and laughing at the old man, who was the worst hand of the whole lot. But it was useless, the vessel was to start the next day, and there was no rousing him.

Tim Bradley, to tell the truth, was hard at work studying and perfecting a plan which had within the last few hours forced itself into his brain. He had heard of men as hard pushed as himself gaining their point by concealing themselves in the hold of a ship till she was fairly at sea. Why shouldn't he do so? At mid-day the ship's deck was deserted; he might do it easily enough. But to leave all that he cared for, that was the pang. His children, Kitty, the old man, how bitterly they would reproach him! Still, with seventy, sixty, or even fifty pounds a year, a few months would see them by his side, in the midst of plenty. Ducks twenty shillings a pair! A leg of mutton for sixpence! It was a hard struggle.

In the morning Tim called upon Joe, the pigeon-fancier.

"Havent you got some of them carrying sort?" he asked.

"As nice a pair as ever opened a wing," was the answer.

"I'm a-going a walk; shall I take one on 'em and fly him—just for a Jark?"

Joe had no objection, and, giving the proper direction, handed over the bird.

At twelve o'clock the weaver hurried to the nearest baker's, and bought himself a dozen hot and steamy biscuits. At the nearest place he filled his bladder he had brought with him, and, trying them to his handkerchief, fastened them round his waist; then, running back again to the Dock, he went to survey the vessel. All was bustle. The ground round about was covered with packages and luggage. Gun-cases, coats of hens, bright pots and pans, rabbit-butcher, trusses of hay closely packed, and bound with iron hoops—everything indicating a long journey. At six o'clock the anchor was weighed—after a few hours the vessel would be tossing on the sea. If he had any compunctions of conscience before, the bustle and excitement of the scene now decided him. Yes, he would go! What were a few months' suffering to years of prosperity to come? Say what they would, he would go!

The deck was crowded with passengers: some seated on their trunks, with their eyes sorrowfully turned towards the city, as if looking for the friends they were to leave for ever; others, for ever, their faces beaming with hope, looking to reach the promised land. Whilst among the latter walked the sailors, watching everything with a calmness and indifference that seemed strange to the scene.

Tim's blood was boiling within him; instead of finding the deck deserted, it was crowded with life. Was there no chance? A half-hour would decide his fate.

He went on board to watch his opportunity, his excuse being that he wished to see his old friend the sailor. The clock was stealing slowly on—he could wait till the last minute, and then, risking detection, leaped suddenly into the hold.

Chance at last favoured him. A vessel outward bound was leaving the dock, and as she passed the *Good Friend*, her rigging became entangled. Instantly every one was in motion, the sailors clambering all aloft, and the passengers crowding to the side. All eyes were busily employed. Not a moment was to be lost. Clinging to the sides of the hold he swung for a moment in the air, and then dropped himself upon the packages.

It did not matter to him that he was not to fall, but he made no great, that, creeping behind a large cask, he listened breathlessly to hear if he had been noticed. But no one came, and clambering over bales and boxes till he had reached the darkest corner, the man crept into a small opening, and crouching down, awaited the sailing of the vessel.

The clock struck twelve, and the work began again. Tim from his hiding-place watched the cargo as it was lowered down to the men who received it below. He scarcely dared to breathe, for fear they should hear him. The goods were lowered so unceasingly, that he could not help blessing the strange ship for the aid it had afforded him. Throughout the remainder of the day not another chance occurred, and it would have been madness to have made the attempt whilst the sailors continued in the hold.

Once the men came so near, that he could have touched them; and they pushed the bales so closely together, that his shoulders were pressed back so that he bit his lips with pain; but he never stirred.

Before the clock had struck four all the goods had been stowed away, and the sailors mounted on deck again. As the last man left the ladder, a pigeon whizzed by him.

"See that, Bill!" he cried. "Who the deuce has been shoving pigeons down here?"

"Never mind, it's only one less for the colonies," answered the man. "I suppose the cage has been and got broke. Come on," and in a few moments Tim was no longer to be seen.

Now he was safe. Hurrah for Australia! Sixty pounds a year! He had listened to every sound. What bustle there was overhead! He could hear the men running about, and shouting louder and louder as the time for starting drew near. At last he thought he could catch the squeak of a fiddle, and at one end of his prison there was a grating noise as of a heavy chain being drawn up, and the footsteps above were heard.

He could not sleep that night—his thoughts were at home with the old man and his daughter. They would be waiting for him, wondering at his absence, fearing for his safety, whilst he had left them in their struggling. But Heaven knew he had done it all to serve them; and when a few months had passed, they would bless him for it.

Presently his fancy took another form. Suppose a storm should arise, and the vessel be wrecked, what would become of him? Should he shout and cry, and wave his arms, or should he sit and wait? Suppose they would rush in upon him the very first. Or, if in the tossing and pitching of the vessel, he should be crushed or smothered under the huge casks around. There to lie and groan in the agony of a broken limb, with no one to comfort or attend him—it would be fearful. And even if he recovered, to land in his new country as a cripple, to be looked upon as a burden, where stout limbs and sturdy sinews alone were wanted!

To shake off the thoughts, he rose, determined on exploring the hold. His eyes were groping in the darkness, and he could not tell what he distinguished one black object from another. So he groped his way until he reached one of the ends where the sides grew so narrow that he could touch them both. How his heart beat as he heard the gurgling of the water they were plunging through.

To pass the time, he set about making for himself a nest more comfortable than the one he had left. He felt for a soft place, and when he found it, he was not long in making it. He had a goodly stock of provisions, he thought; and he was not long in making it. He had a goodly stock of provisions, he thought; and he was not long in making it.

Each time, after he had slept, he would allow himself half a biscuit. By this means, his stock of provisions would last him until far away from land, when there was no chance of their putting him on shore. He was not long in making it. He had a goodly stock of provisions, he thought; and he was not long in making it.

He must not sleep for the future, but be constantly on the watch. Feeling his way to a packet of hoes, he drew one out, and, armed with it, determined to defend himself against the hungry brutes. On all sides he could see their eyes shining among the holes, and if he slept he was lost.

How long he kept awake in this manner he could not tell; but at last he grew weary, and his eyes would close involuntarily, and, struggling as he would, and much as he feared the danger, he was in the end forced to rest. When he awoke, refreshed in body and mind, how he laughed at his foolish fears! Oh! he would make friends with the Jolly rats; they were the best fellows in the world; and, instead of meaning to attack him, only came to him for company's sake. So now to dinner. But the biscuits were gone. Had he mislaid them? He felt every rat in vain. As a last resource, he lighted a candle, and, upon the very first, he saw the rat he had been looking for. He was not long in making it.

Now came the horrors of starvation. How slowly and surely the hunger crept upon him! He tried to sleep again and forget, but the gnawings in his stomach made it impossible. He felt about everywhere, to try and find something that would serve for food. He handled carefully every packet in his way, sniffing at them as well; but still no success, and the exercise only made his sufferings more keen. Then, as a last resource, he shouted for help. He listened, but no one came. Again he shouted, louder and louder; but no rescue. Mad with fear, he yelled and screamed, putting his hands to his mouth to carry the sound more surely; but the wind without was whistling too shrilly for any one to have heard him.

Must he die, then? After all his hopes and troubles, must he die for want of food, that in a few weeks was to have been in plenty around him. No! No! No! He shouted even more violently. The rats grew weak from want, and he, kneeling in prayer, weeping as he called for mercy, at last, leaning on his feet, he tried to reach the mouth of the hold, beating the casks around him with his hoe. But no one came to the opening. Despair seized upon him, his legs tottered under him, and he sank senseless to the ground.

When he opened his eyes, the light blinded him. Where was he? Was it a dream, or of death?

He was swinging in a hammock, and, as he looked around the cabin, his eyes opened with wonder. It was still the ship, but how had he escaped from the hold?

At last he heard a step descending the ladder. It was his old friend the sailor.

"Oh! you're up, are you?" he said, laughing. "You seem to be pretty fond of yawning. You've a dear touch for you, my lad."

"You may open your eyes till you crack 'em, and well. Just another hour, and you'd a-wisited your great-grandmother sure enough."

"How did they find me?"

"It's precious lucky for you we've co's on board. Why, we wanted some grub for 'em, and my mate had to go fetch some. 'Jim!' he shouts to me. 'Below there's a rat!' There's a mate grating sou'ers," says he, and we've got a lantern, and there, sure enough, we found you."

"What did Captain say?" asked Tim.

"Why, he cursed a bit. Only that you were a'most dead, and couldn't

bear him, he gave over. The passengers all came to have a look at yer, and they axed him how much 'd take to carry you to port, and the women 'scried it among us, and that's how you're here. It's the cheapest wayage as ever was made."

Hurrah for Australia! At last his hopes were to be fulfilled.

(To be continued.)

TO CORRESPONDENTS.

RECAPITULATION, Bedford-row; Cox, Shewsbury; J. T. The French Lottery (Lingotta 400) has not been drawn; we have the time been named in the French newspapers. M. B. We cannot advise you to go to the "Liquor Company." C. J. H. "The deuce" is a good name for a dog. J. T. B. The promise line concerning "Peter and Paul" are from Byron's "Don Juan."

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THE "JYLLAND," DANISH GOVERNMENT STEAMER.

DANISH STEAM-SHIP "JYLLAND."

The Iron Steam-ship *Jylland* has just completed her first voyage between one of the richest agricultural districts of the kingdom of Denmark and the Port of London, having succeeded in opening up a steam communication where until this time it had been deemed impossible. Several large lakes and an extensive inland water communication have their opening into the sea by means of a shallow bar-entrance, with not more than 7 feet; and it was long supposed that no vessel of a sufficiently large size, and, at the same time, possessing the qualities of a good wholesale sea boat, could be constructed, that should, at the same time, possess the small draft of water requisite for entering these waters. The *Jylland*, however, has proved herself to unite all these qualities, and has returned from having performed all that could be desired and more than had been promised: she did the voyage out in 45 hours, and home in 47; and brought to Blackwall a cargo of 130 head of cattle and horses, 70 pigs, besides a large stock of other agricultural produce, all in the most perfect condition, and on a draft of water one inch less than had been contracted. The *Jylland* has been constructed, under a grant of the Danish government for the encouragement of agriculture and commerce, for Mr. Regner Westenholts, of Mark-lane. She is 450 tons burden, and propelled by engines of 120 horse-power; the ship and engines having been constructed, and the ship wholly fitted out, by Messrs. Robinsons and Russell, of Millwall.

HAMBURG GOLD MEDAL.

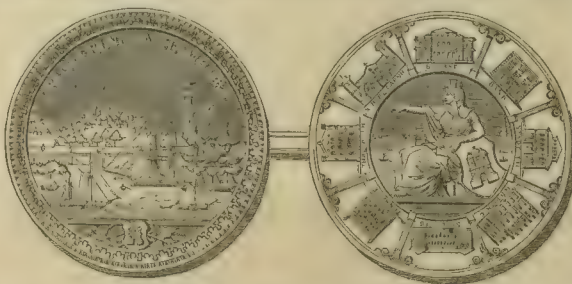
WRECK OF THE "HELENA SLOWMAN" STEAMER.

This chaste and beautifully-executed Gold Medal has been presented by the Senate of the Free Hanseatic City of Hamburg to Capt. Honey, for his noble conduct in rescuing the passengers and crew of the *Helena Slowman*. This new iron screw steamer, built at Hull, and of 800 tons burden, 180 horse-power, and commanded by Captain Paulsen, left Hamburg for New York in October last, with a valuable mixed cargo and 154 passengers, manned by a crew of 36 men. The vessel was overtaken by a frightful storm, which unshipped the rudder, and rendered the steamer utterly unmanageable; when, providentially, the *Devonshire*, American packet-ship, came in sight, in lat. 42.13, long. 61.80; her commander, Captain Honey, instantly bore down, and, after much trouble and imminent danger, succeeded in bringing the passengers and crew safely on board his own vessel.

The third mate's boat had made two trips, but was stove in when making the third; and the mate, Mr. Johnson, one seaman, and seven passengers, met with a watery grave.

The Senate also presented the first mate with a similar medal, enclosed in a velvet box, ornamented with most beautiful silver open chasing.

This is an example on the part of the Senate of Hamburg, which it would be well if the British Government would occasionally imitate.



HAMBURG GOLD MEDAL.—PRESENTED TO CAPTAIN HONEY.

ERRIS FISHING SETTLEMENT.—LIFE FISHING-BOATS, "ERRETER" AND "HOPE."

THESE Life-boats, which are fitted up as fishing-boats, and built by Messrs. T. and J. White, of Cowes, for the Erris Fishing Settlement and Converts Employment Society, Neimullet, county of Mayo, have just been launched and tried by W. T. Campbell, Esq., the superintendent of the above institution. The above is a Sketch of their recent trial off Osborne House, the marine residence of her Majesty. The large boat is 32 feet long, 10 feet beam, and 4 feet deep, with air compartments in bow and stern, which extend round her gunwale, having twelve divisions, and down to platform, under which is a water-kelson running fore and aft, and capable of holding one ton of water ballast, which can also

be used as a well for live fish, being fitted with air valves. The advantage to be derived from the buoyant properties of this boat is, that, having a displacement in her compartments of about four tons, she may, in addition to her water-kelson, carry one ton of iron ballast; and, in case of being filled in a tremendous gale at sea, have three tons of buoyant power, which makes it impossible for her to sink: the boat also being much stiffer with water in than when empty, renders her altogether a most valuable and serviceable boat, for the double purpose of fishing or saving life from wreck, should her services be required for that purpose. During her trial, with all sails set, and only her water-kelson filled as ballast, occasional strong puffs put her lee gunwale under water from one to two feet, and it was found that when water came into the boat it added considerably to her stability.

The Erris Fishing and Industrial Settlement was commenced in September, 1849, with the object of affording instruction to the rising generation, and of stirring up amongst them habits of industry, and an idea of the value of remunerative employment. The plan adopted is to receive the boys of the peasantry who have attained the age of from 10 to 16 years, as apprentices for four or six years, according to their age; to board, lodge, educate, and train them to the improved modes of deep sea fishing, the manufacture of nets and lines, boat-building, &c.

The design of this institution recommends itself strongly to our judgment and approval: it seeks to reach the root of Ireland's disease in the rescue of her youth from the baneful example of idleness and ignorance under which previous generations have grown up; and it seeks to turn to an available account the stores which Divine Providence has planted within the people's reach. The treasures of the earth and sea must be sought for with labour and diligence, and in labour well directed it will be found that there is abundant profit. We hope the promoters of this institution will receive liberal support from a generous and philanthropic public, and that they may thus be enabled efficiently to carry out their plans; many a valuable offspring of benevolence, which might have become of infinite national benefit, has perished in its infancy because it did not obtain an interest in public estimation.

PLATE PRESENTED TO CAPTAIN J. C. DALRYMPLE HAY.

This elegant piece of Plate has just been presented to Captain John C.



ERRIS FISHING SETTLEMENT LIFE FISHING-BOATS, "ERRETER" AND "HOPE."

Dalrymple Hay, of her Majesty's brig *Columbine*, by Messrs. Jardine, Matheson, and Co., and the principal merchants in China, for Captain Hay's valuable services while in command of the *Columbine*, in suppressing piracy in the Chinese seas.

The testimonial is a handsome table-ornament. The form of the Vase is round, and divided into four compartments; three of which represent the engagements at the different periods with the pirates; the fourth is allegorical. At the base are three Chinese figures, kneeling in submissive attitude; and on the cover is Britannia and the Sea Horse. The Vase stands on an octagonal ebony base, on which are two plates with the following inscription:—



PLATE PRESENTED TO CAPTAIN J. C. DALRYMPLE HAY, R.N.

Presented to Captain JOHN C. DALRYMPLE HAY, of her Majesty's brig *Columbine*, as a memorial of the important service rendered by him to the commerce in China, in the destruction, by the forces under his command, of the piratical fleet of Shap-ang-Tsal, consisting of 64 junks, mounting 1200 guns, and carrying 3000 men, in the Tonquin River, on the 20th October, 1849, by Jardine, Matheson, and Co., for themselves and insurance offices under their charge; Dent and Co., for themselves and insurance offices under their charge; Macvicar and Co.; Gilman and Co.; Jamieson, Edgar, and Co.; George Lyall and Co.; Fletcher and Co.; Dirom Gray and Co.; Prestonjee, Framjee, Cama, and Co.; Cowasjee, Sapoosjee, Lingrans, David Sassoon, Sons, and Co.; and 15 Parsees, Hindoes, and Mahomedan firms, of Canton, Hong-Kong.—20th February, 1850.

The Vase forms part only of the presentation, the remainder consisting of a set of silver dishes and covers; the whole being from the establishment of Messrs. Hunt and Roskell, 156, New Bond-street.



MALAYAN TAPIR, IN THE MENAGERIE OF THE ZOOLOGICAL SOCIETY, REGENT'S PARK.

MALAYAN TAPIR,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY, REGENT'S PARK.

The list of additions to the menagerie, which is now issued monthly to the Fellows of the Zoological Society, is not only a most convenient and instructive arrangement for their benefit, but a most irrefragable proof of the energy and success with which that establishment is conducted. In looking over the lists which were circulated in April and the present month, we find that the novelties which have been obtained since the close of 1850 are so numerous, that they would in themselves alone form a collection sufficient to repay one for a morning spent among them.

At this particular period, when all the world is crowding to our shores, it is fortunate for the Zoological Society that their delightful garden has reached a degree of beauty and reputation which has never been exceeded either in its own history, or by any of the kindred institutions on the Continent. There is no doubt that a most brilliant season will reward the managers for the spirited improvements which they have effected, and afford fresh sinews for still further progress when the excitement of the World's Fair has faded into the past.

The first musical performance of the Life Guards, on Saturday week, attracted a numerous muster of Fellows and visitors, notwithstanding the unfavourable circumstance of a May shower; and we then took an opportunity of looking at most of the novelties to which we have alluded. Among them we discovered the subject of our illustration, which is, in every respect (after the Elephant calf), the most interesting among them.

The *Saladang Gindoi Tenu*, or Malayan Tapir (*Tapirus Malayanus*), much exceeds the American tapir in size, and is peculiarly remarkable in respect to colour. It is a native of Sumatra, and some of the other islands of the Indian Archipelago, as well as of the Malay peninsula. The above specimen was obtained from the latter locality, having been captured at the foot of Mount Ophir about the end of last summer, in company with another in the menagerie, which has been obtained for the Society by John Dunbar, Esq., of the Sudder Court, Calcutta.

The Malayan tapir first became known to Sir Stamford Raffles in 1805, a living specimen having been sent to Sir George Leith when Governor of Penang. It was afterwards observed by Major Farquhar, in the vicinity of Malacca. A drawing and description of it was communicated by him to the Asiatic Society, in 1816; and a living subject was afterwards sent to the menagerie at Barrackpore, from Bencoolen. Sir Stamford Raffles presented the first specimen which reached England to the Zoological Society, on his return from Sumatra, but it did not long survive its arrival.

The present animal is said to be about two years old, and, although of

large size, is still considerably short of its mature stature, which Sir Stamford Raffles describes as equalling the buffalo in body. Although differing in many essential characters from the Tapir of America, the Malayan Tapir resembles it in the spotted colouration of the young, which, however, disappears at a much earlier period than in that species.

The Tapir of the Old World is particularly interesting to palaeontologists as the nearest existing form to the palæotherium; and it would almost seem as if the restoration of that extinct form in Professor Owen's admirably illustrated work on British Fossil Mammalia had been sketched from the subject now in the Gardens, instead of being constructed from the accurate reasoning upon osteological data for which he is so celebrated.

THE CRYPT OF THE CITY OF LONDON GUILDHALL.

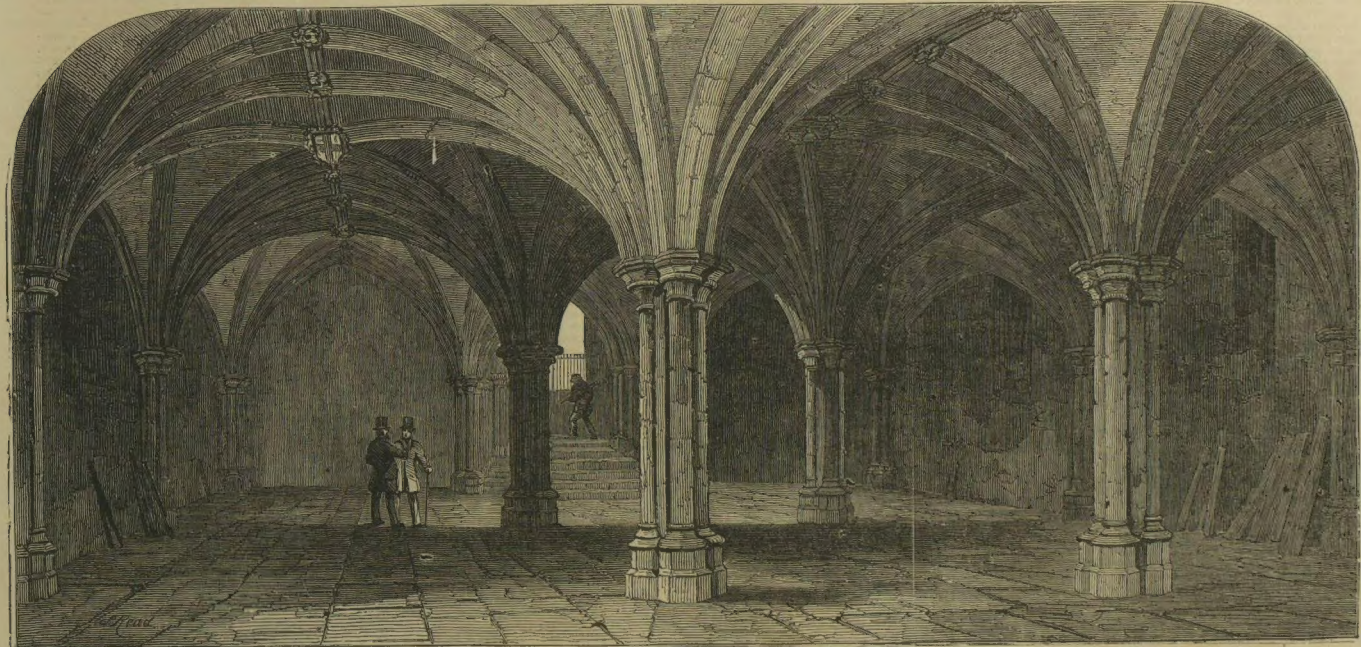
THERE is so little to admire in the present superstructure of the Guildhall, in King-street, that few persons, save those specially devoted to archaeological pursuits, are aware that beneath the ill-assorted pile is a rare antiquarian treasure—the vaulting of the ancient Hall, erected in the year 1411, and the only portion of the edifice which escaped the Great Fire of 1666. This interesting relic is rarely shown to visitors; but more than one attempt has been made to restore it architecturally, which has been partially done; and it is by no means creditable to the Corporation that they should allow the place to fall into decay, their attention appearing to have been confined to the festive apartment above.

The Crypt is divided into aisles by clustered columns, from which spring the stone-ribbed groins of the vaulting, composed partly of chalk and bricks, the principal intersections being covered with carved bosses of flowers, or heads and shields.

The north and south aisles had formerly mullioned windows, now walled up. At the eastern end there is a fine Early English arched entrance, in fair preservation; and in the south-eastern angle is an octagonal recess, which formerly was ceiled by an elegantly groined roof, some remains of the corbels and springings being discernible on the walls. The height of the Crypt, from the base of the columns to the intersection of the groins, is 13 feet.

The mouldings of the capitals and the ribs of the vaulting are much dilapidated, one of the clustered pillars supporting the vaulting being much decayed. Mr. Bunning, the City architect, caused it to be removed, and a new clustered column of Purbeck marble to be substituted. The whole of the stonework is now being rubbed down and cleaned, and the clustered shafts and capitals repaired.

The large antique bowl standing in the Crypt, opposite the north entrance, is of Egyptian red granite, and was presented to the Corpora-



THE CRYPT OF THE CITY OF LONDON GUILDHALL.

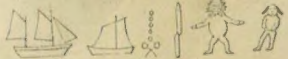
tion of London by Major Cookson, having been sent to England by him in the ship *Anacron*, from Alexandria, with a letter dated 1st Sept., 1850, requesting the Corporation would do him the honour to accept it, as a testimony of his respect, and a memorial of the British achievements in Egypt.

The Crypt has already been inspected by a great number of our metropolitan visitors, who have been much gratified with Mr. Bunning's restoration of the columns and arches. We should add that at the last meeting of the Archaeological Association, Mr. Lott (the founder of the museum of City antiquities, at the Guildhall) proposed to devote a day, to be fixed by the committee of the Association, to make a party, including the many country and foreign members now in London, and to accompany them to the Crypt and other objects of interest not usually shown to strangers. The offer was gladly accepted, and acknowledged by the president.

THE SEARCH FOR SIR JOHN FRANKLIN.

We have been favoured with the following extract from a letter, received 23rd ult., from Lieutenant W. H. Hooper, dated Fort Simpson, Mackenzie River, 29th October, 1850:—

"Here we are again, safe and sound, and snugly moored for the winter, awaiting only a more genial season for our return to England. My last letter was dated from Fort Good Hope, July 17th, and I shall continue from that time. At eight p.m. on that day, we started, crossed the Arctic Circle in the night, and reaching Point Separation on the morning of the 30th, left that place in the afternoon, after being nearly devoured by mosquitoes and gad-fies. We continued our descent of the river, sailing by day, and drifting by night. On the morning of the 32nd, we got sight once more of the Arctic Ocean, and landed on Garry Island, which lies off the north of the river. From a high part our view presented, to our sorrow, ice in profusion, and solid as a rock, which immediately acted as a terrible damper upon our ardent anticipations of a successful voyage; the temperature also changed terribly, and our cold winter clothes took the place of lighter habiliments. On the 35th, we reached Toker Point, and found a number of Esquimaux winter-dwellings, but no person visible; here we deposited a few trinkets, together with a hieroglyphic scratched on a board, of which this is a correct delineation.



"Leaving this spot in the evening, we ran along the coast all night, seeing the sun above the horizon at midnight, but we managed to get embayed in the pack by morning; and now fairly began our troubles, and a series of detentions which utterly frustrated all hopes of success. We were obliged to 'take' (i. e. force through) the pack. Finding we could not get on, we were compelled to retrograde some distance, and then land on a miserable spot with no other shelter than sieve-like tents from melting snow and heavy rains, and only rotten wood for fire. Here for three days we remained, with a gale of wind, and temperature frequently below freezing-point, but managed to get away on the 59th, spending the day in tedious endeavours to force a passage through the ice, seven or eight feet thick, and sometimes more, now rising 30 or 35 feet high, like so many houses in ruins, and again large flat places of fields several acres in extent. It is difficult for you to conceive how greatly chilled the wind became as we saw at the westward. Here, in the month of July, a south breeze, which ought to be the softest and warmest exhalation of *Æolus*, stagnates the blood by its freezing blasts. At night, after two hours' very great toil in again forcing through the pack from seaward, we got on again at Point 'McKinley.' Here was an Esquimaux village; most of the huts falling in ruins, and apparently long desolate. We were unable to start from this place for two days. We found the frame of an omiak, or woman's boat, as also those of two or three kayaks, or men's boats; some harpoons, with flint heads, lashed on with sinews; double and single paddles, and a few pieces of small wooden accoutrements and ladles, pieces of wood drilled for producing fire, pits for containing blubber, &c.; also the carcass of a wolf, apparently dead from starvation. The nets were laid out, and a few fish taken; a young seal also got entangled in them; but the man who searched the nets, a Canadian, who had never been in the Arctic before, fancying it some monster, let it escape. We also got some swans and geese. We got away from this place 1st August, the ice having gone off shore a little, and we landed for the night not far from Cape Brown. On the evening of the 3rd we had to break through the pack from seaward to get to shore. When inside the pack, we made for the shore, and encamped on Cape 'McKinley' for the night. The 4th, being Sunday, we remained there; on the 5th we reached Nicholson's Island; and on the 6th, proceeded across to Point Perine Maitland, and met the first Esquimaux we saw in the trip, an old and a young woman, who were in a horrid fright, and commenced a loud jabber, apparently signing and entreating us to go away; by red-powder signs and a few trinkets, we soon re-assured them; and the old lady went into the men's tent, and sat down at her ease. They were horribly dirty both in person and dress, which latter was the same as we saw at the westward. We remained all the 7th, detained by bad weather. I send you a representation of the Esquimaux ladies, and the primitive tools we found near their dwellings: the standing figure represents the younger woman, with her hair braided in immense bows at the top of her head, and a huge mitten of rabbit-skin on her left hand, to which there was no accompaniment for the other member. She wore a frock of seal skin, with pointed ends; tight breeches and boots made of the same material. Her interesting baby was in its natural garment, shored up at her back between her back and her skin, and there securely retained by means of a leather or hide girdle. On the morning of the 8th we quitted these charming creatures with a sigh, and steered for Cape Bathurst, not far from which we observed twelve tents of Esquimaux with a great number of natives around them; some eighteen kayaks, containing a man each, and four komiks filled with women and juveniles, came out to us; they approached without the slightest sign of fear, shouting, screaming, and gesticulating merrily. The men laid hold of our boat and tumbled alongside, throwing in deer meat, skins, fish, &c.; while the ladies seemed half mad, running quite across our bows, throwing in wild fowls, boots, and all sorts of things, all of which, however, we declined and refused. We made the men push off, and encamped at night on one of the Baillie Islands. Several men remained with us and were most friendly, but strongly addicted to pilfering. On the 9th, after going to the extreme of the island, we were again stopped by ice and had to land. Crowds of natives came over to us. In the afternoon we saw and heard upon the ice, and gave chase together with the natives. Our small boat went by sea to cut off his escape, while I, with some of the men and Esquimaux, took the hill above him with a double-barrelled gun; I hit him at more than 100 yards distant, drawing first blood, at which he dropped; and then rose a loud shout of delight from our friends; but a grizzly bear is not so easily killed, for he soon got up again and ran on as if nothing had happened, taking the water with a plunge, and climbing the masses of ice which lay in his path. An Esquimaux now went after him in his kayak, and it was interesting to see how well he managed his tiny craft, and turned poor bruiser. He would go close up, let draw an arrow, and then, as the bear turned to attack him, back water and splash in his face with his double-bladed paddle. After five or six hours' chase, and when the poor beast was wounded in three or four places by the guns, and looked like a porcupine for arrows, he was at last shot dead by one of the men in the boats, and brought on shore. He was in girth as great as a pony; his entire weight was estimated at 440 lb. From this date until the 14th, we were constantly near Cape Bathurst, trying to find a passage past it; but the compact state of the ice resisted our utmost efforts. The natives were constantly with us, and the greatest harmony existed; but they are ardent thieves, and require constant watching. One fellow put my silver spoon up his arm, another buried the frying-pan, and our pockets were assiduously, though secretly, tried, but all missing articles were generally given up on demand. I was, of course, busy retelling our adventures, but I had no time to do so, as I was constantly hounded by desire, obliged to have recourse to imitations of various kinds, either by voice, gesture, or a sketch on paper, which were generally successful, causing huge bursts of merriment. On the night of the 14th we set out retracing our route, being completely stopped from advancing, of which the captain gave all hopes. On the 21st we landed at Port 'McKinley' again, and met one man and three women, Esquimaux, who received a few presents, and were thereby much delighted. I now pass on to the last day of August, when from N. it struck the river, and, on the 23rd of this month, after having touched at all the lower forts, arrived at this place, and were most truly delighted, for a more thoroughly disagreeable trip I never made. Nearly the whole period of our sea voyage, that is, from exit to entrance of this river, we were engaged with ice in weather, that in severity, would, I think, be considered great in England even in winter. Our food was bad enough, consisting of dried deer's meat and pemmican, and our lodging was provocative of rheumatic ill, and to crown all the search was utterly unsuccessful. I do not think it probable that we shall renew our search, as there are no remaining means here of equipping or provisioning for another season; no, nor I think we shall have a chance of returning to this time to our homes from which we shall have been absent four years. We leave this in June, and hope to reach England in October.

[Commence Pullen's lengthy despatch details heavy work, great hardships and disappointments, and also shows the untimely and dangerous state of the boats fit to daring an enterprise, and details the melancholy examination into a massacre of six ineffective Esquimaux, while engaged in barter, by some Indians near the mouth of the Mackenzie.]

LITTLE'S IMPROVEMENTS IN ELECTRO-TELEGRAPHIC INSTRUMENTS.

One of the most important improvements in the Electric Telegraph has just been effected by Mr. George Little. The annoyances to which the operators in Electro-Telegraphic manipulation are subject are very great, and out of the many annoyances which so frequently occur there are five; namely—imperfect insulation of the line or conducting wires, the vibration of the indicators thereby preventing the communications from being read off clearly; the deflection of the indicators from local causes, such as the passing of currents of atmospheric electricity downwards to the earth, and *vice versa*; the demagnetization of the indicators by lightning, which has the effect of stopping all communications for a time; and great trouble in adjusting the indicators upon their axes.

To those who understand the science of Electro-Telegraphy, it will be seen, on reference to the accompanying Engraving, in what way Mr. Little obviates the difficulties named. On the dial plate is secured a socket, which is made to hold in its upper part a permanent magnet, which is termed by the inventor a magnetic reservoir. Immediately underneath, and adhering to the same, by attraction, is a second needle, which is surrounded by spirits of wine, contained in a glass tube, which is secured to the bottom part of the socket. Near the bottom of this glass tube is seen the small coil of insulated copper-wire.

The object of the large magnet is to keep up at all times a constant supply of magnetic power in the needle, so that if at any time lightning should make its way into the instrument, and rob the needle of any of its power, it will immediately take up a fresh supply without at all interfering with any communication that may be going on at the time. And as the needle is held up by magnetic attraction, the use of the axis is thereby dispensed with, the spirits in the tube preventing any sudden jerking and vibration. The socket which is joined to the dial-plate enables the operator to move the whole of the apparatus to the right or to the left, as occasion may require, if the needle should be bent out of course from local causes.

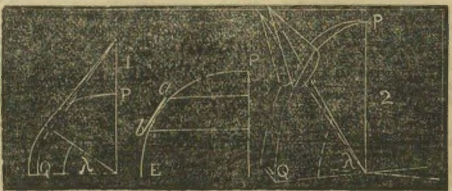
In indicating letters and words by this Telegraph, never more than two indications are required. The inventor has not only produced an instrument beautiful in point of arrangement and simplicity, but one that, as regards economy, we do not think can be surpassed.

ROTATION OF THE EARTH.

(Concluded from page 420.)

The following is an abstract of the principal details connected with the Rev. Mr. Baden Powell's discourse and illustrations.

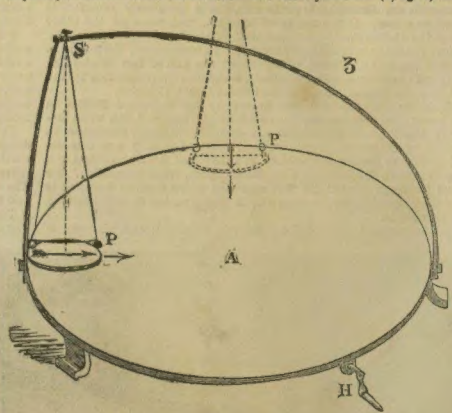
He observed, that an idea of such an effect as the one under consideration seems to have occurred long ago, and is mentioned in a paper in the "Philosophical Transactions" by the Marquis de Poli, in the course of some observations on the pendulum in a different kind. He remarks, "I then considered (adopting the hypothesis of the earth's motion), that in one oscillation of the pendulum there would not be described from its centre perfectly one and the same arc in the same plane;" but does not pursue the subject, as being foreign to his immediate object. It appears, however, that in 1827 Fowson had hinted at such an effect, but supposed it of inappreciable amount. To some minds difficulties present themselves in the first instance, which are easily removed by a few simple illustrations. In the first place, the deviation from parallelism itself of the meridian of any place, during the rotation of the earth, is a simple geometrical question, easily illustrated, and the inclination expressed by a trigonometrical formula. This was determined



by two small meridians (figures 1 and 2) showing the tangent planes of two meridians, p, q, meeting in the axis of the earth produced; then, if the inclination of the meridians is θ:—

$$\text{Then } \cos \theta = \cos \lambda + \text{sine } \lambda \cos \lambda.$$

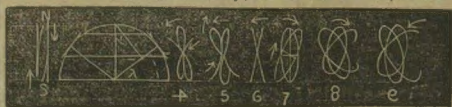
In the next place, the independence of the motion of the pendulum, notwithstanding that the point of support is carried with the earth in its rotation, and that the whole, to form a part of the earth, is a point easily elucidated by very simple experiments in which the vibration of a small pendulum (x, fig. 3) is



seen to continue parallel to itself, notwithstanding a motion given to the point of support (s): the effect being, in fact, only a simple consequence of the co-existence of two motions communicated to a body at the same time. The apparatus shown in fig. 3, lent by Mr. Bishop, was here exhibited. Motion is communicated to the plate A by means of the handle H.

The experiment originally made by M. Foucault, in the cellar of his mother's house, was repeated and confirmed by M. Arago, and other eminent scientific men, with all due precautions, in Paris, as also at Ghent, Brussels, and elsewhere. In England, besides the public recitations at the Royal Institution, and Polytechnic Institutions, by Dr. Rogers, Mr. Bishop, and Mr. Bass, the experiment has been tried at York by Professor Phillips, and at Bristol by Mr. Bunt, with careful attention to all circumstances likely to ensure the avoidance of the sources of error, and to secure precise results.

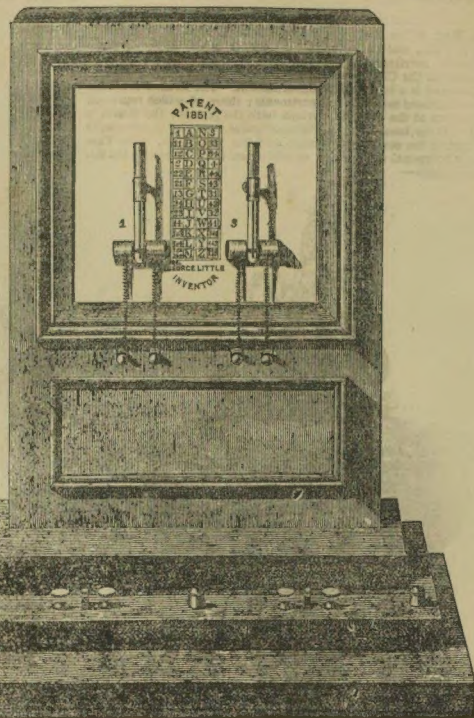
At the Royal Institution, on the present occasion, the experiment was exhibited under two modifications. Dr. B. Jones and Mr. Bass, by arrangements shown in our illustration. Other observers have also repeated it in various places, especially at Dublin, where Messrs. Haughton and Galbraith, Fellows of Trinity College, Dublin, have pursued the research with all imaginable precautions, and have obtained results somewhat different from those of other observers. According to nearly all the other experiments, the rate of deviation continued uniform; according to Messrs. Haughton and Galbraith it varied; commencing from N. it attained a minimum between N. and E., and a maximum between S. and W.—it was fluctuating and unsteady; and the time of a complete rotation



was observed to be 25h. 56m. The sources of error are numerous and not easily to be effectually guarded against. The most formidable, perhaps, is the extreme difficulty of causing the pendulum to vibrate truly in one plane (figure 6 giving the curve of its path, as shown in an exaggerated manner at figure 6).

Phil. Trans., No. 469, 1732.

Comptes Rendus, No. 6, 1851.

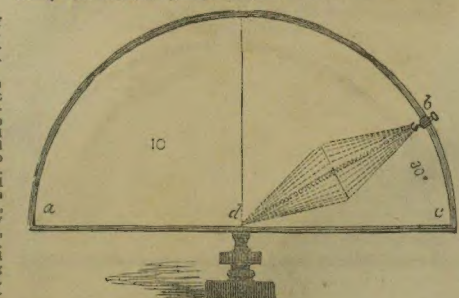


LITTLE'S IMPROVED ELECTRIC TELEGRAPH.

Figures 4 and 5), and to prevent its motion in a narrow ellipse. When this takes place, and the arc is considerable, the direction of the major axis is continually changing, as shown in Figures 7, 8, and 9, owing to a well-known mechanical cause; but this deviation is always in the same direction as that of the original motion of the pendulum, and consequently changes when that direction is changed. The true deviation may be distinguished from this, in that it is always from E. to W. independently of the direction of the original impulse, and the ball always passes accurately through the centre in every oscillation, whereas in the former arc it never does. For greater accuracy, a variety of other precautions are requisite as to the perfect freedom of suspension, guarding against currents, &c.; also the elliptic deviation may oppose that due to the earth's rotation, and thus the latter may manifest itself in spite of the former. It is extremely probable that many of the public repetitions may have been affected by these causes of error; yet some of those referred to have been made by men of so much eminence and experience as observers, as to render it highly improbable that they should not have been sufficiently guarded against every source of fallacy. The accordance of many of the results at different places, within fair limits of error, is also a strong argument in favour of their accuracy and trustworthiness. The rates of deviation for one hour as determined at different places do not seem to be more discrepant than would accord generally with the differences of latitude. The experiments give:—

At Paris	about 11° 30'
Bristol 11 42
Dublin 12 00
York 13 00

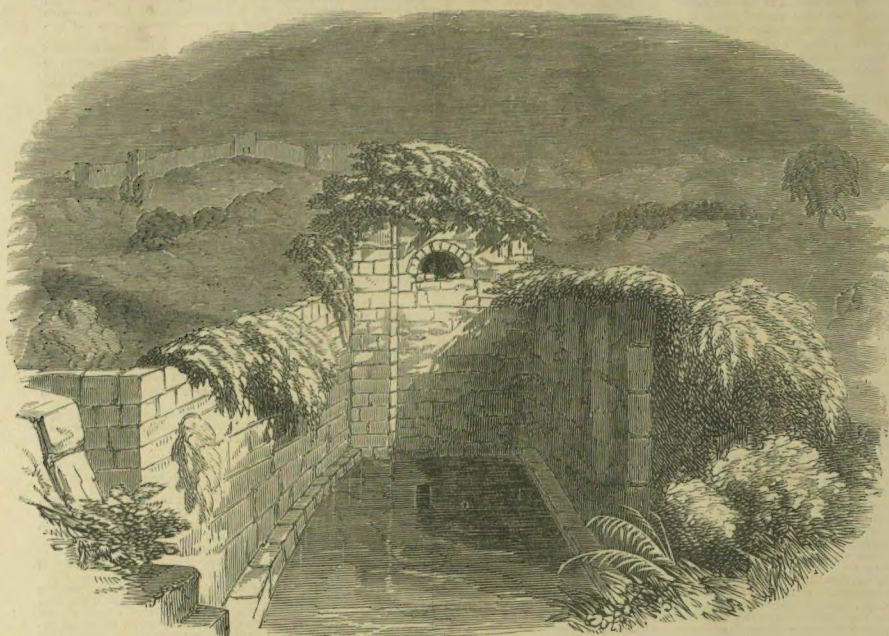
To apprehend the theoretical principle, it is necessary to take into account, 1st, the simple inclination of two successive positions of the meridian of a place to each other, after an interval of time; 2nd, the independence of the motion of the base of the pendulum, of the rotation of the point of support; and, 3rdly, that the ball, though free in this sense, is not, however, wholly free, being conditionally drawn down by gravity in a direction continually changing relatively to the original direction of vibration, as the earth revolves. Hence, though, from the second cause, the ball would have a tendency always to preserve a motion parallel to its original motion, and thus to deviate regularly from the meridian, it is from the third cause, that the ball, in its motion, does not preserve that intermediate direction. The exact determination of this direction cannot be made on any general considerations, but, according to the Astronomer Royal, Professor Airy, must be the result of detailed mathematical investigation. Thus, in general, in any illustration or experiment, as long as the axis of vibration will continue parallel to itself, the arc of vibration will continue parallel to itself; but if the axis do not continue parallel, the direction of the arc of vibration will deviate. This distinction has been laid down, and illustrated, experimentally, by Mr. Wheatstone. The investigation, as pursued by Mr. Biot, as well as by Mr. Fyfe, and other mathematicians, is primarily founded on the method long since proposed by Euler, of resolving the rotary motion of one point on the earth's surface into two, one about the vertical of that point, the other about an axis at right angles to it, of which the latter is the part effective in determining the direction of gravity on the pendulum, and is proportional to the sine of the latitude of the point. Mr. Biot makes this general theorem the foundation of an analytical investigation, in which the conditions of the motion of the pendulum generally are expressed by certain differential equations, the integration of which conducts him to certain expressions, which, when simplified, by the consideration of limiting the vibration to small arcs, give the azimuthal velocity uniform in the direction from E. to W., and in a similar proportion to the sine of the latitude, giving, therefore, the deviation for one hour in the latitude of Paris about 11½ degrees, and the time of a complete revolution 25h. 56m. An investigation has also been made, independently by the Astronomer Royal, leading to the same result. Other mathematical solutions have also been proposed by Dr. Day, of Bristol, and Mr. J. R. Young, late Professor of Mathematics at Belfast. The latter gentleman has obtained, as a consequence of his investigation, one remarkable result, which he states thus:—"The arc of the circular rim of the table, subtended by the angle of deviation at its centre, is always (in one revolution of the earth) exactly equal to the difference in length of the two parallels of latitude described by the centre and extremity of the meridional diameter of the table."



Modifications of the principle have been suggested by M. Chéles, on the idea of the difference of rotary velocity between any two points (a and b, Fig. 1.) on the same meridian (x, y), which difference, invariable as it might seem to be for the minute length of a vibration, he shows will in successive vibrations be one sensible. This idea is nearly the same as that announced by Laplace, producing a deviation in the plane of a projectile fixed in the direction of the meridian. The same idea has been discussed by other mathematicians. M. Poisson has suggested that if two balls, suspended by separate strings, hanging together in contact and consequently both partaking in the velocity of rotation of that point of the earth, were to be suddenly separated by releasing a spring placed between them, and at first confined by a string, they would then possess

See Herchel's Astronomy, p. 444.
Comptes Rendus, No. 6, 7.
Library, March 28 and April 18.

Mechanics Magazine, May 3d, 1851.
Rev. Col. vol. iv. ch. 5.



SCENE FROM THE MOVING DIORAMA OF "JERUSALEM AND THE HOLY LAND."—THE POOL OF SILOAM.—(SEE PRECEDING PAGE.)

In 1754, the polite Chesterfield and the witty Walpole felt it no degradation to the work over which they presided, that it should be jocosely about his fraternity, and hold that his profession was more dignified than that of the author:—

"Far be it from me, or any of my brother authors, to intend lowering the dignity of the gentlemen trading in black ball, by naming them with ourselves: we are extremely sensible of the great distance there is between us: and it is with envy that we look up to the occupation of shoe cleaning, while we lament the severity of our fortune in being sentenced to the drudgery of a less respectable employment. But while we are unhappily excluded from the stool and brush, it is surely a very hard case that the contempt of the world should pursue us, only because we are unfortunate."—*The World*, No. 57.

This is pleasant banter, though it may have helped to perpetuate a popular error as to the condition of authors in the present day, but cleverly corrected at the Literary Fund festival on Monday week, when Mr. Thackeray repudiated that pity which so many people, taking their cue from the degraded literary hacks of George II., are so very much disposed to bestow upon them. "The patron and the gaol" have alike ceased to be words of fear in the ears of the literary men of England. Gay makes his "black youth's" mythological descent from the goddess

of mud, and his importance in a muddy city, the subject of the longest episode in his amusing "Trivia." The shoe-boy's mother thus addresses him:—

So thrive: at some frequented corner stand;
This brush I give thee, grasp it in thy hand
Temper the foot within this vase of oil,
And let the little Triped aid thy toil;
On this methinks I see the walking crow,
At thy request support the miry shoe;
The foot grows black that was with dirt embrown'd,
And in thy pocket jingling halfpence sound,
The goddess plunges swift beneath the flood,
And dashes all around her showers of mud:
The youth straight chases his post; the labour ply'd
Where branching streets from Charing-Cross divide;
His treble voice resounds along the Mews,
And Whitehall echoes—"Clean your honour's shoes!"

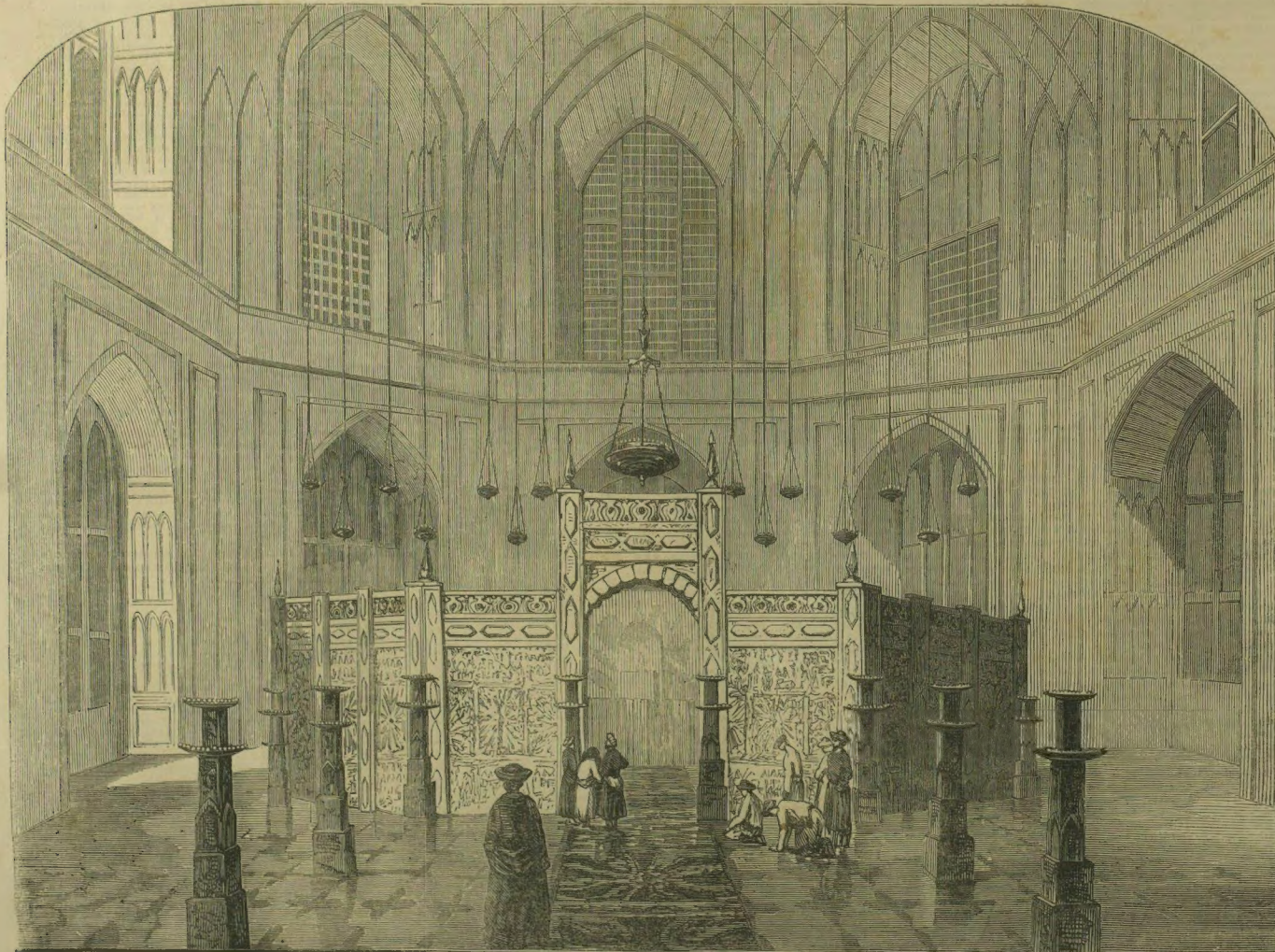
The cry is no more heard; but the professional Shoe-black has re-appeared in our streets, possibly suggested by the great influx, this season, of visitors from the Continent, where boot-cleaning is carried on in well-appointed shops: the Parisian, for example, occupies a velvet-covered

seat, and reads the newspaper, while his vaunted boots are re-polished. In London, the black revival is under different auspices, being, in fact, a measure of the enlarged philanthropy of our times, the common-sense of which consists in employing the unemployed. The Shoe-black Brigade is an offshoot of the Ragged School system, and is a sensible provision for an obvious want in a well-dressed capital. Each of the members of the Brigade wears a number, and is accountable for his conduct: his coat is scarlet, which is characteristic of a brigadier, but may possibly shock the tender nerves of the Peace Society more than would the items of an Ordnance estimate, and may likewise give offence to the sensitive class of politicians who, in every floating feather, see a standing army. Bating this inappropriateness of warlike costume for a very peaceable employment, the Shoe-black Brigade is entitled to our commendation; and the



THE SHOE-BLACK BRIGADE.

accompanying portrait may serve to direct the reader's attention to one of the many social novelties of the Annus Mirabilis 1851. The charge for cleaning is 1d. each person: there are 24 in the brigade, and to each is given 8d. of every 1s. received.



THE TAJ MEHAL.—FROM THE GALLERY OF ILLUSTRATION.—(SEE PRECEDING PAGE.)